




TAIWAN GLASS IND. CORP.


2017

CORPORATE SOCIAL RESPONSIBILITY REPORT

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About This Report

Since its founding in 1964, Taiwan Glass Industry has been committed to the development of the industry, through the constant pursuit of innovation and the development of new products. TGI fulfills corporate social responsibility as a good global citizen. Since the first Corporate Social Responsibility Report was published in 2013, TGI has issued five Corporate Social Responsibility Reports, demonstrating to the public and all stakeholders TGI's continued commitment to civic responsibility and the pursuit of sustainable social development as well as sharing the fruits of this sustainable development. The 5 themes of this report include "Sustainable TGI", "About TGI", "Quality TGI", "Green TGI" and "Friendly TGI", which manifest TGI's efforts and results in sustainable development indicators such as the economy, environment, employee care, human rights and product responsibility in 2017, illustrated with relevant statistics.

For the public and stakeholders to learn more about TGI CSR initiatives, TGI created a designated section on the company website. In this corporate responsibility section, not only can this report be downloaded, there are also regularly updated sustainable development objectives, strategies and results. TGI has put in place an online stakeholder feedback form to facilitate communication between TGI and stakeholders.

In this report "TGI, the Company or we" all refer to Taiwan Glass Industrial Co., Ltd. For other key terms, letter abbreviations, or technical terms, used in this report will be noted in the same pages. The content of the report was arranged through a systematic analysis model to identify the priorities and decide interested parties' for being the reference base of information disclosure.




Report Coverage and Calculation Basis

This report covers TGI's results in corporate social responsibility from January 1, 2017, to December 31, 2017. Some content also relates to projects in 2017 and beyond, as well as future policies, objectives, and plans, which all form part of the report.

The scope of the 2017 annual report covered TGI's Taipei headquarters and manufacturing facilities in Taiwan (Taoyuan Factory, Hsinchu Factory, Taichung Factory, Lukang Factory, Lukang Flat Glass Factory and Changpin Factory). If the index relates to other regions, these are separately described in the report. The 2017 data is presented in international generic indicators. Any estimated numbers will be noted so in related chapters. All financial figures have been audited and confirmed by Ernest & Young and are all in NT dollars. This report's coverage is similar to that of the same report in 2016.

Report Writing Principles and Programme

The content and structure of TGI's 2017 Corporate Social Responsibility Report is in line with international standards by following Global Reporting Initiative's Standards (GRI Standards) Sustainability Reporting Guidelines which was formally published by Global Sustainability Standards Board (GSSB). It uses substantive analysis to identify the sustainability issues that stakeholders are concerned about, decide priorities and analyze sustainability issues, related strategies, objectives, and measures, with reference to the following related initiatives:

-  Global Reporting Initiative's Standard Sustainability Reporting Guidelines
-  United Nation Sustainable Development Goals (SDGs)
-  Earth Charter and OECD Guidelines for Multinational Enterprises

- Accountability's AA1000 Series of Standards (2008 version)
- International Standard on Assurance Engagements 3000
- United Nations Global Compact
- ISO 26000 Social Responsibility Guidance Standards
- TWSE Corporation Rules Governing the Preparation and Filing of CSR Reports by TWSE Listed Companies

Report Editing

The editing of this report was planned, edited and revised by the TGI CSR group which was also responsible for the overall planning, communication, integration, information compilation and editorial revisions. The CSR group was composed of executive team members as well as those from the company and relevant sectors in the factories.

Information and Data Quality Management

Every materials and data in this report was collected by every department and submitted to the CSR group. A draft of the report was submitted to the CSR group and individual team members proofread and revised their particular areas of data and content. After finalization, an impartial third party verified the final content. It was then sent to the Chairman for final review prior to publication.

Report Assurance

The Ernst & Young accounting firm, an independent and credible accounting firm, was commissioned to conduct limited assurance in accordance with the provisions of the Joint Standards Publication on verification of non-historical financial information or review on TGI's 2017 CSR Report, which was compiled according to the Global Reporting Initiatives Standards (GRI Standards) Sustainability Reporting Guidelines. Once the assurance was done, we have communicated with the governance units over the result. For the scope and detailed conclusions of the independent assurance, please see the independent assurance report in the appendix of this report.

Issuing Period and Cycle

TGI regularly publishes the CSR Report each year

Current version: Published in June 2018

Previous version: Published in June 2017

Contact

We hope that through this report the general public and relevant stakeholders can learn more about TGI's efforts in the promotion of sustainable development. If you have any questions and suggestions on TGI's '2017 Corporate Social Responsibility Report, please contact us as follows:

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Website: <http://www.taiwanglass.com>

Message from the Chairman



Chairman
Lin, Por Fong

International trade was increased in 2017 due to the efficiency of global economic growth. 2018' s economic situation is expected to maintain steady growth. However, there are still uncertainties including the butterfly effect of the US-China trade conflict, the rising Fed rate, the trend of NTD exchange rate, and the continuous macroeconomic control of Mainland China. All these risks require government and enterprises to respond carefully.

TGI benefited from Taiwan and Mainland China' s profitability and the turnaround of business profitability. TGI' s consolidated net income before tax achieved NTD2.39 billion, a 236.58% increase from 2016. We make a brief report by product lines as follows.

In the flat glass, both production and marketing in Taiwan are stable. TGI is training more professional personnel, improving automatic technology equipment, and enhancing the added-value of products by selling high-class building materials such as Low-E Glass and Super Clear Glass, etc.

In the ultra-thin glass, the yield rate of 0.33mm product was improved and is supplied steadily to Mainland China and USA market. Meanwhile, to respond to the thinner and lighter covers of electronic products and glass screen protectors, TGI has actively developed the 0.28mm and 0.25mm products to upgrade product value and competitiveness by segmenting the type of competition.

Mainland China continuously pushes the reform of overproduction. It intends to achieve the goal of building a well-off society by conducting its economic development to high quality and domestic demand, and weeding out outdated industrial capacity and restore the balance of supply and demand by implementing strict environment law. All TGI' s subsidiaries in Mainland China respond to the rapid

change of policy and law by complying with the environmental standard, investing in environmental equipment, and controlling risks. TGI fully uses its flexible capacity and inventory to reduce risk and loss.

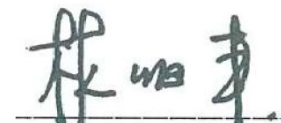
In fiberglass, the technology and quality of fiberglass products are always the core competency of TGI. In particular, the capacity of electronic Fiberglass fabric is occupying a significant position in the global market. For the material of PCB, TGI has successfully developed products with globally leading technology. It meets the demand for mobile devices, electronic products for automobile and IoT, and continues to hold the market trend to supply products to high-end clients. This year, TGI signed an agreement for technology cooperation, manufacturing, and supply with Owens Corning, the global leading manufacturer of fiberglass. Through this agreement, TGI obtains the most advanced fiberglass formulation and technology in the world. It can help cut production costs and provide clients with higher performance and more environmental products. Furthermore, it will also boost domestic clients' composite material quality and market competitiveness.

In container glass, the demands of domestic and export sales are steady. The heat-resistant baby feeding bottles made of α-33, with thermal resistance to 150C of temperature difference, have entered the supply chain of global leading brands with safe and high quality, with high market share. TGI continues to reinforce traditional sales channels for tableware and kitchenware products, as well as selling select products on B2C platforms, to get closer to consumer markets. Regarding the private brand development, to create product and market differentiation, TGI has commissioned Fukasawa Naoto, who is a Japanese artist of industrial design, to plan and design logotype and products of our private brand. It will be sold on the market by the end of this year.

As Mainland China implements its environmental policy, the demand in the flat glass market is increasing, as well as the price of soda ash. Therefore, Shihlien Chemical Industrial Jiangsu Co., Ltd. (SCJ) reached full production and sales in 2017. With regard to Pharmaceutical sodium chloride, sales are expected to start after GMP certification is obtained in the first half of this year.

Looking to the future, besides improvement of existing products and production capacity, and development of a private brand, TGI will continue to train technical personnel to achieve greater operational success. TGI is committed to carrying out its corporate social responsibility by promoting environmental sustainability, enhancing energy safety, creating a green economy, and to contribute to the society of Taiwan, leading this industry to positive development and initiating a more successful and forward-looking future.

Chairman
Lin, Por Fong



Key Achievements of the Year

Silver Award

TGI has been awarded silver price for the past three years in the "Traditional Manufacturing" category incorporate sustainability report award.

10 Major Topics

10 Material Topics were identified in 2017 and effective management policies were formulated accordingly.

36,000,000 M²

TGI manufactured a total of 36,000,000 M² of Low-E products in 2017.

25 %

In 2017, the export of TGI tableware accounted for 25%.

20 million dollars

TGI received a total of NT\$20 million in special technology R&D subsidy from MOEA from 2015 to 2017.

Approximately 3.53 million

TGI donated a total of NT\$3,534,946 in 2017.

392 bags

In 2017, all factories of TGI donated a total of 392 bags of blood in response to the "Give blood, save lives" principle.

100 %

100% of TGI products have passed relevant standards and certifications.

-30 %

Low-E products can reduce 30% of air conditioner usage and energy consumption.

80 %

Customer satisfaction exceeded 80% across all TGI departments.

400 million

Environmental protection expense was NT\$400 million in 2017 for TGI, 54.5% higher than 2016.

180,000 tons

Recycled 180,000 tons of scrap glass in 2017.

-6,882 tons/year

Reduced carbon emission by 6,882 tons in 2017.

Below 15 %

Employee turnover rate has been steadily under 15% in the last 3 years.

1.76 %

General staff' s salary is higher than the legal salary of 1.76%.

+99 %

TGI employed an average of 89 employees with disabilities in 2017, 99% higher than the legal minimum.

75 %

75% of employees returned after paternity/ maternity leave without pay.

4,012 people

4,012 employees received physical examinations in 2017.

Chapter

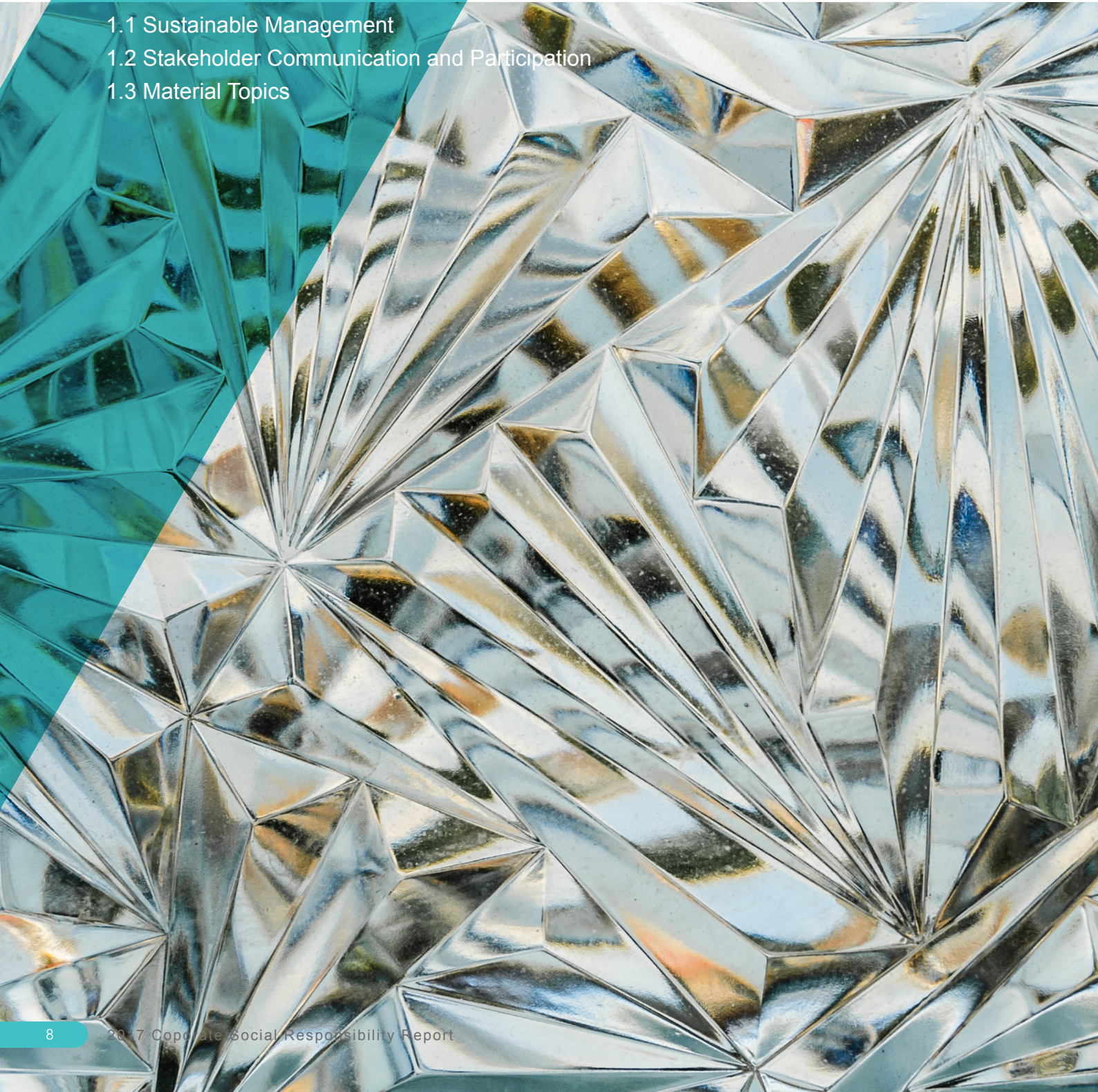
1

Sustainable TGI

1.1 Sustainable Management

1.2 Stakeholder Communication and Participation

1.3 Material Topics



Achievements of Sustainable Operation in 2017

Silver Award

TGI has been awarded silver price for the past three years in the "Traditional Manufacturing" category incorporate sustainability report award.

2 times

Convened two sessions of our "Corporate Social Responsibility Committee" in 2017.

8 categories

TGI identified eight categories of stakeholders, including shareholders/investors/financial institutions, employees, business customers, suppliers, contractors, sub-contractors, dealers and government/authorities.

198 copies

Questionnaires are distributed among stakeholders, according to the communication between stakeholders and TGI and the degree of stakeholders' influence and importance in a total of 198 questionnaires are collected. The impact of each TGI's material issues is accessed by 22 senior executives

10 Major Aspects

In 2017, we identified a total of 10 major perspectives and an effective management policy was assigned to each of these perspectives.



1.1 Sustainable Management

TGI has been committed to the development of the glass industry, to fulfill our corporate social responsibilities, promote advancements in the economy, environment, and society and to achieve our sustainable development objectives since its foundation.

The board of directors, exercising care as good administrators, supervises and assists the management to fulfill their social responsibilities. The results are reviewed and action plans are formulated immediately to eliminate any deficiencies to make sure that the corporate social responsibility policies are implemented. When it comes to TGI' s corporate social responsibilities, the board of directors is responsible for the following :

- a. Propose the CSR mission and vision; formulate CSR policies, systems or relevant management guidelines.
- b. Include CSR in the company' s business activities and development and formulate concrete CSR action plans.
- c. Ensure that the company is disclosing accurate CSR information on a timely basis.



TGI' s CSR Principles which supervises and implements the concept of sustainable management is divided into four major parts:

► **Conducting our business with integrity**

Integrity management is the core value of TGI and its commitments and responsibilities to shareholders, employees, and all stakeholders. The board of directors and managers are all strictly abode by the code of honest business, avoidance of conflict of interest, anti-corruption, and conduct comprehensive risk management.

► **Strengthening sustainable environment**

TGI is in compliance with environmental protection laws and regulations, continuously improving its work environment, reducing environmental pollution, and committing to energy conservation and carbon reduction. To achieve the goal of sustainable environmental management, TGI pays attention to renewable energy issues, innovates green products, and promotes the reuse of resources

► **Building an inclusive workplace**

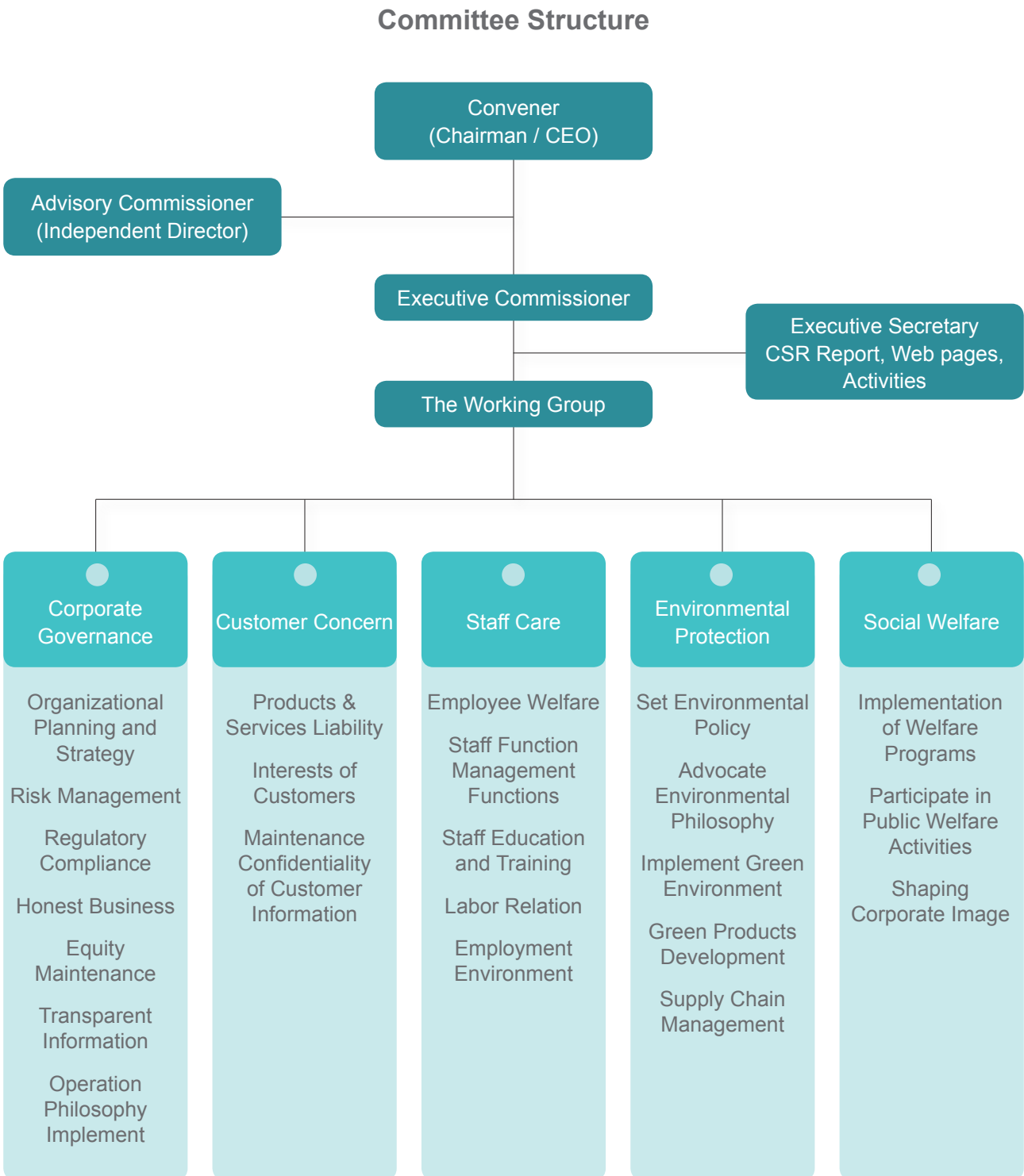
TGI pays attention to the industrial relation which includes employer-employee relation, employee benefits and welfare, and comfortable and safe workplace environment. Also, TGI cares for employee rights, physical and mental health, respects human rights and gender equality, promotes the cultivation and development of talents, and establishes diversified communication channels between employees and the company and TGI Association. TGI aims to build a win-win culture for both the employees and the company.

► **Caring for social charity**

TGI upholds the commitment to civic responsibility, cares and contributes to the society, and takes participation in social charity activities. TGI enhances community development and interactive friendship and provides scholarships for employees and dealers' children.

Corporate Social Responsibility Committee

TGI, to fulfill the implementation of CSR policies, has established “Corporate Social Responsibility Committee” (CSR Committee), with our chairman and president as coordinators, independent directors as advisers and several executive committee members.



TGI CSR Committee convenes a session every 6 months (flexible) but should convene at least a session a year. The Committee convened two sessions in 2017. The agendas include the ISO 14051 MFCA implementation, schedule for the 2017 TGI CSR report, the participation of CSR-related courses, and the corporate social responsibility (CSR) performance of each factory.

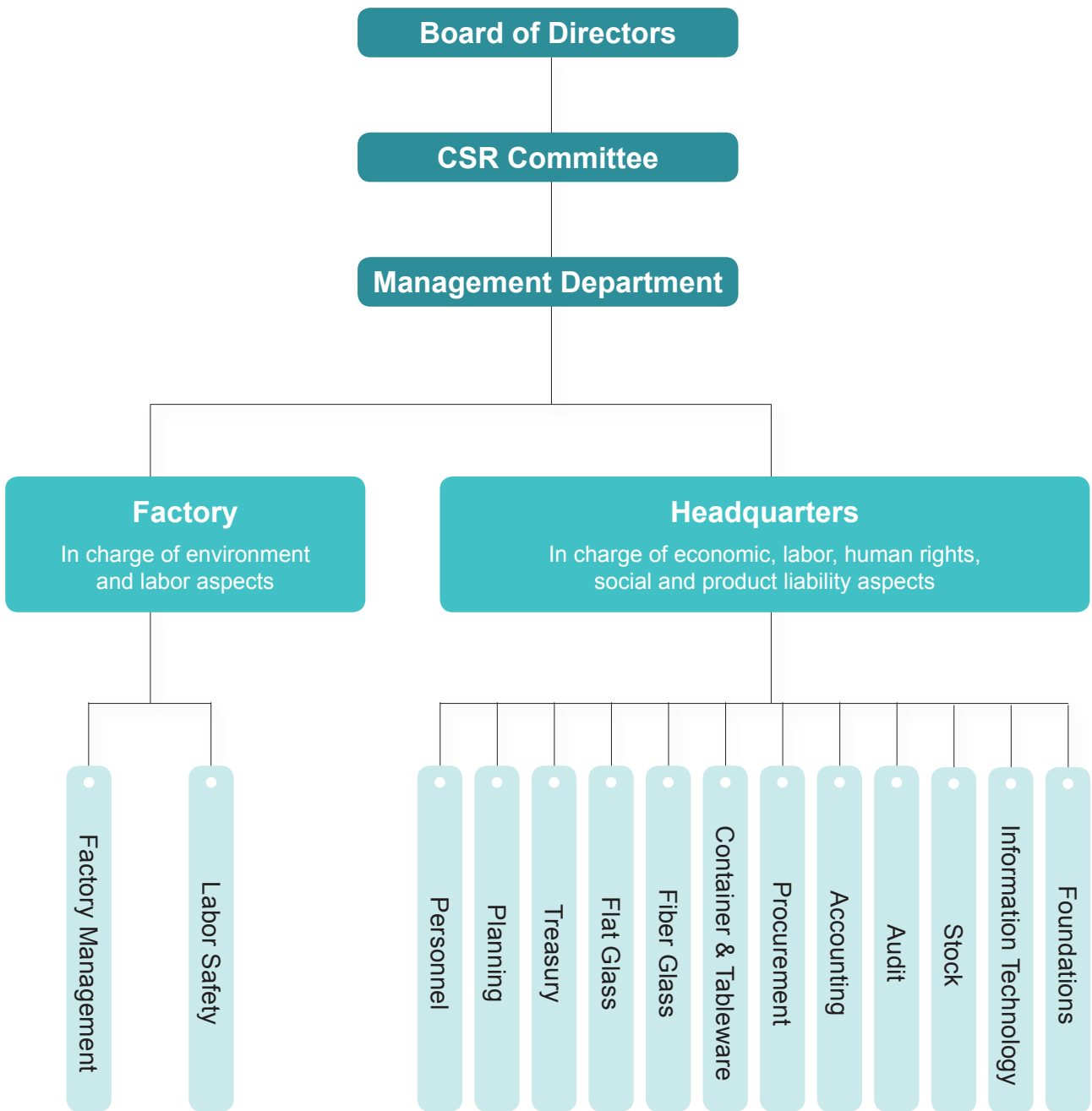
Committee Members

TGI CSR Committee Members			
Title	Name	Gender	Concurrent position at TGI
Convener	Lin Por Fong	Male	Chairman
Convener	Lin Por Shih	Male	CEO
Advisory Commissioner	Huang Chin Yuang	Male	Independent director
Executive Commissioner	Su Yu Ted	Male	COO of Fiberglass Business Department
Executive Commissioner	Hong You Qin	Male	Vice President of Management Department
Executive Commissioner	Li Jing Tian	Male	Manager of Management Department
Executive Commissioner	Pan Ya Lun	Female	Manager of Secretary Department

Responsibilities of CSR Working Group

We build up a “CSR working group” responsible for the overall planning, communication, data integration and the implementation of economic, social, environmental performance. The management department is responsible for the implementation of the integration, and the members include representatives from relevant departments of the company and the factory.

The Structure Diagram of CSR Working Group



In addition to preparing the report, the groups also actively participate in CSR related courses, including Center for Corporate Sustainability (CCS) courses, Industrial Resources Integration and Development Association etc. Through these courses they exchange information about sustainable development measures and recent trends with many different industries, enhancing practice knowledge of editing to raise awareness of risk management. The execute steps of the working group as follow:

The basis for the compilation of the CSR report was by identifying stakeholders and Material Topics.



By analyzing Material Topics, the working group evaluated the current execution and counterstrategies.



All the economic, environmental and social issues arising from TGI's business activities were disclosed in CSR report.



Members of the working group reviewed and amended the content and stats that they were responsible for respectively in the first draft.



After the first draft of the revised version was completed, the CSR report was ultimately reviewed and checked by the supervisors in various departments.



The final draft was verified by an independent third party.



The CSR report was submitted to the chairman for final review before being published.

CSR Achievements

For 3 consecutive years, TGI has won the TCSA Taiwan Corporate Sustainability Award in the "Traditional Manufacturing" category and looks forward to working with every field to promote the spirit of sustainable corporate development. CSR and SDGs will be incorporated into management guidelines and performance goals to create Circular Economy, towards sustainable development.

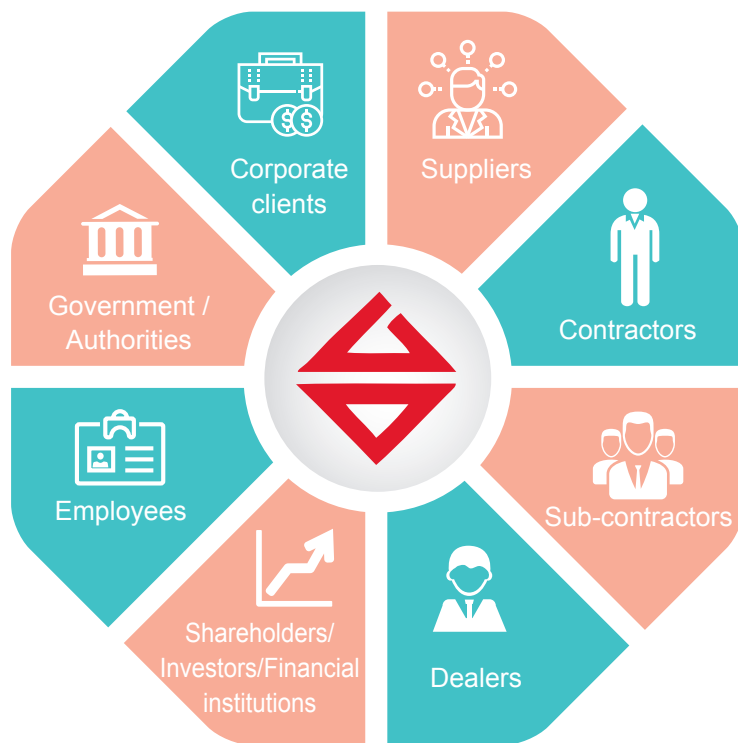


Silver Award in the "Traditional Manufacturing" category of Taiwan Corporate Sustainability Awards in 2017

1.2 Stakeholder Communication and Participation

Identify Stakeholders

To fulfill its commitment to stakeholders and respect and safeguard their legitimate rights and proper interests, TGI convened representatives from various departments to conduct a weight analysis based on anonymous questionnaires according to the communication frequency, dependence, and influence. We have identified the following 8 types of stakeholders:



Communicate with Stakeholders

Through a deep understanding of the topics that stakeholders concern, TGI could respond to the issues which stakeholder focus on in a timely manner. TGI has a variety of communication and appeals channels. We uphold the honest business principle, timely handling, and positive response. To develop effective bilateral communication with the stakeholders, the Board of Directors authorizes the CSR

Committee to review the progress and results in corporate social responsibility periodically. In response to performance assessment, strategic planning is proposed and measures are taken to further the implementation of corporate social responsibility by the groups.

By distributing questionnaires, providing online questionnaires, and communicating with other company in the same industry, TGI also refers to topics of the same industry, benchmarking companies, and international reports, and compiles issues of concern from all stakeholders as incorporating ESG considerations into operation.

198 valid questionnaires were collected and the topics they raised were taken as the main foundation for TGI' s corporate social responsibility measures. In addition to providing an external communication email address on the official website, there are corresponding email addresses of each department to provide information, questions, complaints, etc. from related personnel. We also provide detailed information about the CSR working group.

TGI cares about every stakeholder. In order to respond to societal expectation and maintain good a relationship, we always try to resolve the issues and proceed with improvement. We have the following communication platforms with stakeholders:

TGI keeps effective communication channels with every stakeholder. The main contents are roughly divided into:

Product Information

Business Opportunities

Investor Services

Job Opportunities

Corporate Social Responsibility

Stakeholders	Key concerns	Methods of communication	Corresponding section	Communication Frequency
Shareholders/ investors/ financial institutions	Regulation Compliance	➤ Reports business revenue information	2.3 Corporate Governance 5.1 Talent Structure	Every month
		➤ Annual financial statement and individual financial statements		Once a year
	Employment	➤ Convene general shareholder meeting		Once a year
		➤ Select a spokesperson or an acting spokesperson		Aperiodic
		➤ Financial reports, statements, stock affairs, audits and major announcements in the "Information Disclosure" section on the TGI website.		Every Year/ aperiodic
		➤ Institutional investors conference		Aperiodic
		➤ Internal information system		Aperiodic
		➤ Bilateral communication between the business operators and the management.		At least once a year

Stakeholders	Key concerns	Methods of communication	Corresponding section	Communication Frequency
Employees	Occupational Health and Safety	➤ Complaint phone number, fax, and email for reporting sexual harassment incidents. Any report will be handled by dedicated staff.		Aperiodic
	Employers-Employee Relations	➤ Face to face communication between the management and the union representatives.	2.2 Operating Information 5.1 Talent Structure 5.3 Safe Workplace	Once a year
	Employment Training and Education			Periodic / Aperiodic
	Economic Performance	➤ Various meetings and committees, such as labor-management meetings and welfare committee		
	Market Presence			
Corporate clients		➤ Questionnaire		Once every 6 months/Once a year
		➤ Customer service email		Aperiodic
	Corporate Governance	➤ Customer satisfaction survey	2.2 Operating Information 2.3 Corporate Governance 2.4 Risk Management 3.2 Product Quality Management 3.3 Innovation and R&D 3.4 Customer Service	Once every 6 months/Once a year
	Product Quality	➤ Participate in product exhibitions to gain a direct insight of the clients and market trends. For example, the Flat Glass Business regularly attends Taiwan and Germany Building Materials Exhibition; Fiberglass Business participated in China Composites Expo, France JEC Exhibition; Container & Tableware Glass Business took part in the Hong Kong Housewares exhibition and infant supplies exhibition in the Shanghai.		Once every 2 years/Once a year
	Sustainable Development Strategy			
	Innovation and R&D			
	Customer Service			
	➤ Customer visits, on-site surveys, audits, questionnaires or irregular meetings		Aperiodic	



Sustainable TGI



About TGI



Quality TGI



Green TGI



Friendly TGI



Appendix

Stakeholders	Key concerns	Methods of communication	Corresponding section	Communication Frequency
Dealers		<ul style="list-style-type: none"> Act as a good communication platform between the clients and TGI. Understand the clients' need and assist them with issues via personal visits, phone calls and emails. 	2.3 Corporate Governance 2.4 Risk Management 3.2 Product Quality Management 3.3 Innovation and R&D 3.4 Customer Service	Aperiodic
	Corporate Governance	<ul style="list-style-type: none"> Give project presentations, determine wind load deflections, glass strength design, plan types of glass and review of the standards. 		Aperiodic
	Product Quality			Aperiodic
	Innovation and R&D	<ul style="list-style-type: none"> Assist with orders, samples, complaints, QC, equipment maintenance, technical service and so on. 		Aperiodic
	Risk Management			Aperiodic
	Customer Service	<ul style="list-style-type: none"> Customer satisfaction survey. 		Once a year
		<ul style="list-style-type: none"> Attend Taiwan and Germany Building Materials Exhibition. 		Once a year/ once every 2 years
	<ul style="list-style-type: none"> Attend China Composites Expo and France JEC Exhibition. 	Once a year		
Suppliers	Product Quality	<ul style="list-style-type: none"> Communicate with suppliers and contractors via phone, fax or email and communicate with related parties to help them deal with issues after receiving messages. 	2.2 Operating Information 2.3 Corporate Governance 2.4 Risk Management 3.2 Product Quality Management 3.3 Innovation and R&D	Aperiodic
	Sustainable Development Strategy			
	Corporate Governance	<ul style="list-style-type: none"> Supplier audit. 		Quarterly evaluation
	Innovation and R&D			
Risk Management				

Stakeholders	Key concerns	Methods of communication	Corresponding section	Communication Frequency
Contractors	Corporate Governance	➤ Questionnaire survey.	2.2 Operating Information 2.3 Corporate Governance 5.1 Talent Structure	Once a year
		➤ Interview/ phone calls and communications.		Aperiodic
	Sustainable Development Strategy	➤ Contractors are required to fill out letters of safety commitment and notions about working environment hazards. All the contractors are required to understand and countersign for the letters.		Every time a contractor enters a factory for construction work
	Economic Performance	➤ Contractors' job safety and health training.		Aperiodic (30 events in 2017)
Sub-contractors	Product Quality	➤ Questionnaire	2.2 Operating Information 2.3 Corporate Governance 2.4 Risk Management 3.2 Product Quality Management 5.3 Safe Workplace	Once a year
		➤ Sub-contractor evaluation		Aperiodic
	Sustainable Development Strategy			Aperiodic
	Corporate Governance	➤ Sub-contractor complaint number, fax, online platform or email. Communicate with related parties to help them deal with issues after receiving complaints.		
	Risk Management			
Occupational Health and Safety				
Government / Authorities	Regulation Compliance	➤ Maintain a good interaction with the competent authorities and attend public hearings held by the competent authorities.	2.3 Corporate Governance 4.3 Green Innovation 5.3 Safe Workplace	Aperiodic
		➤ Mailroom staff of TGI will sort through the letters and distribute them to responsible departments.		Aperiodic
	Occupational Health and Safety	➤ Each factory has a dedicated department to handle documents and discussions with the local competent authorities.		Aperiodic
	Effluents and waste	➤ Invite government/ competent authorities to visit TGI factories and energy-saving product launch press conferences.		Aperiodic



Sustainable TGI



About TGI



Quality TGI



Green TGI



Friendly TGI



Appendix

1.3 Material Topics

The material topics identification process

2017, we follow the GRI Standards through establishing a systematic analysis model of materiality analysis, the sustainability issues, which the stakeholders concerned or interested in can be identified as the basic information to be disclosed in the report to have effective communication with the various stakeholders. TGI 's materiality analysis model was divided into:



Identify stakeholders

TGI 's working groups discuss issues with the heads of internal departments and takes other industry groups' stakeholders as the reference. TGI identified **8 categories** of stakeholders, including shareholders / investors / financial institutions, employees, corporate clients, suppliers, contractors, sub-contractors, dealers, government/ authorities and so on.



Collect sustainability issues

The issues can be collected from external and internal sources. First of all, the **32 sustainability issues** relevant to TGI were derived from the external sources include the GRI Standards from economic, environmental and social aspects. Secondly, major international issues and standards will be included. These two will be compiled into a list of concerned aspects, which will be first reviewed by the stakeholder representatives into a preliminary list of concerned aspects. The internal sources include feedbacks and opinions from stakeholders collected from various sources.



Analyses of material topics

To evaluate the value of the assessment by the results of returned questionnaires which were sent to different stakeholders and TGI executives with various concerned level. In 2017, TGI collected **198** CSR questionnaires, of which 176 were questionnaires of relevance, 22 impact questionnaires were received from TGI executives.



Ranking material issues

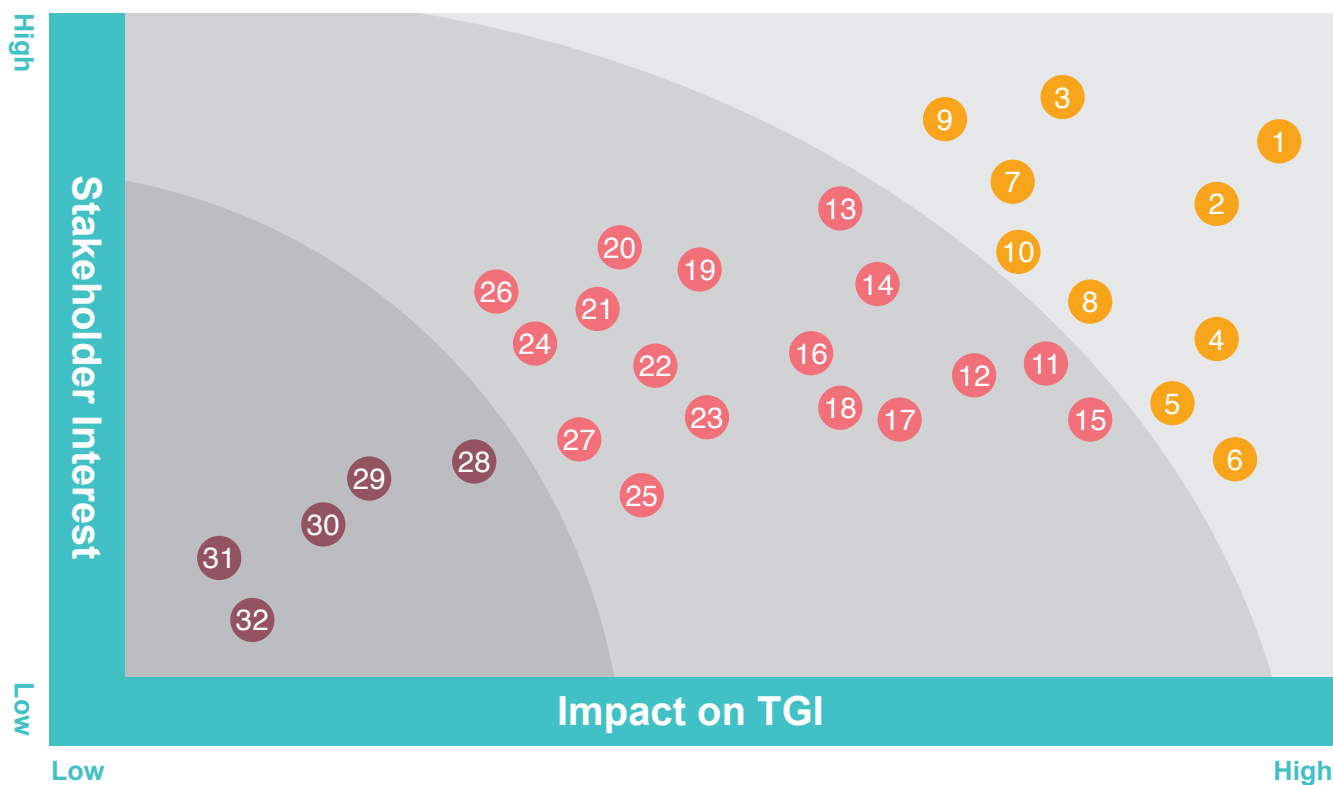
According to the results of the questionnaires, and considering the weighting for each issue in different assessment criteria and the extent of the impact of sustainable development as considered by company management, TGI calculated a risk for each issue, made a prioritization of disclosure, and considered each aspect in adopting an effective management approach. In 2017 TGI identified **10** material issues after analyzing the survey and discussed internally.



Review and discussion

The internal and external object and scopes were identified by internal discussion according to the priority of major aspects from the substantive analysis. It will be considered as the cornerstones of TGI 's CSR Report disclosure.

Material Topics Substantive Analysis



Prioritization of Material Topics

- | | |
|------------------------------------|---|
| 1 Product Quality | 17 Green House Gases |
| 2 Sustainable Development Strategy | 18 Training and education |
| 3 Corporate Governance | 19 Anti-corruption |
| 4 Innovation and R&D | 20 Market Presence |
| 5 Risk Management | 21 Stakeholder Communication |
| 6 Resource Conservation | 22 Biodiversity |
| 7 Occupational Health and Safety | 23 Raw material |
| 8 Customer Service | 24 Labor right |
| 9 Regulation Compliance | 25 Green Packaging |
| 10 Employment | 26 Procurement practices |
| 11 Effluents and waste | 27 Diversity and equal opportunity |
| 12 Air Pollution | 28 Indirect Economic Impacts |
| 13 Economic performance | 29 Freedom of association and collective bargaining |
| 14 Water | 30 Anti-competitive behavior |
| 15 Information Security | 31 Local communities |
| 16 Supply Chain Management | 32 Public Policy |



Sustainable TGI



About TGI



Quality TGI



Green TGI



Friendly TGI



Appendix

Prioritization of Material Topics, Chapter Disclosure of Management Policy and Analysis of Scopes

● represents a significant issue. The management policy and performance indicators will be disclosed in this report.

▲ represents a significant topic. TGI will continue to strengthen the management and disclose the related information in this report by using the CSR evaluation and analysis of subsidiaries and suppliers.

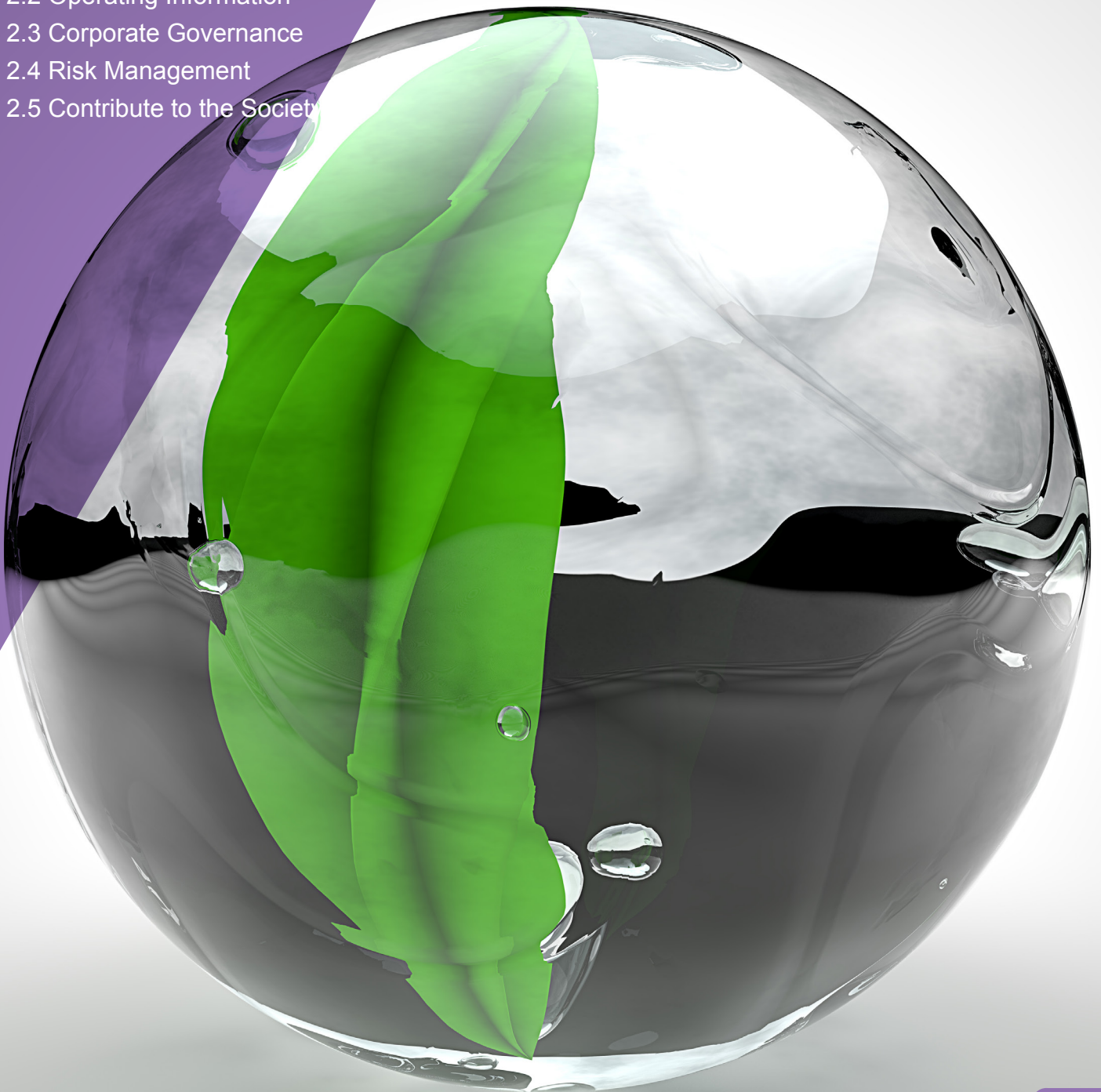
Prioritization	Material Topics	Corresponding UN SDGs	Responding	Internal organization	External organization				
				TGI	Suppliers	Contractors	Corporate clients	Dealers	Sub-contractors
1	Product Quality		Ch3 Quality TGI	●	▲		▲	▲	▲
2	Sustainable Development Strategy	 	Ch2 About TGI	●	▲	▲	▲		▲
3	Corporate Governance		Ch2 About TGI	●	▲	▲			▲
4	Innovation and R&D		Ch3 Quality TGI	●	▲		▲	▲	▲
5	Risk Management		Ch2 About TGI	●	▲		▲	▲	
6	Resource Conservation	   	Ch4 Green TGI	●					
7	Occupational Health and Safety	 	Ch5 Friendly TGI	●	▲	▲		▲	▲
8	Customer Service		Ch3 Quality TGI	●					
9	Regulation Compliance		Ch2 About TGI	●					
10	Employment	 	Ch5 Friendly TGI	●					▲

Chapter

2

About TGI

- 2.1 Introduction
- 2.2 Operating Information
- 2.3 Corporate Governance
- 2.4 Risk Management
- 2.5 Contribute to the Society



Achievements of Corporate Governance and Operation in 2017

20 million dollars

In 2015~2017, the research and development grant for the science and technology research and development project of the Ministry of Economic Affairs totaled 20 million dollars.

3,534,946 dollars

TGI donated a total of NT\$3,534,946 in 2017.

7 times

TGI convened 7 sessions of board meetings in 2017.

37 internal audits

In 2017, a total of 37 internal audits were conducted.

6 members

To establish a healthy director nomination system, a nomination committee was established with 6 members.

392 bags

In 2017, all factories of TGI donated a total of 392 bags of blood in response to the "Give blood, save lives" principle.

0 incidents

No TGI employee was involved in corruption, bribery or blackmail in 2017. There were no political donations either.

2.1 Introduction

Founded in 1964, Taiwan Glass Ind. Crop., for the last 50 years, has been following the company founder Lin Yu-Chia' s business principles of honest hard work and focus on our core business of glass. As the leader in the glass industry in China, Hong Kong, and Taiwan, TGI has put Taiwan in an important

position in the global glass industry. In the future, TGI will continue to implement advanced technologies and company-wide quality management to provide our clients with satisfying products. We will continue to develop even advanced technologies, improve our supply, production, distribution, and service to achieve sustainability and make contributions to the society as an important player in the global market.

History and TGI Business Philosophy

*Note : Please visit TGI' sofficial website for the history and TGI business philosophy.

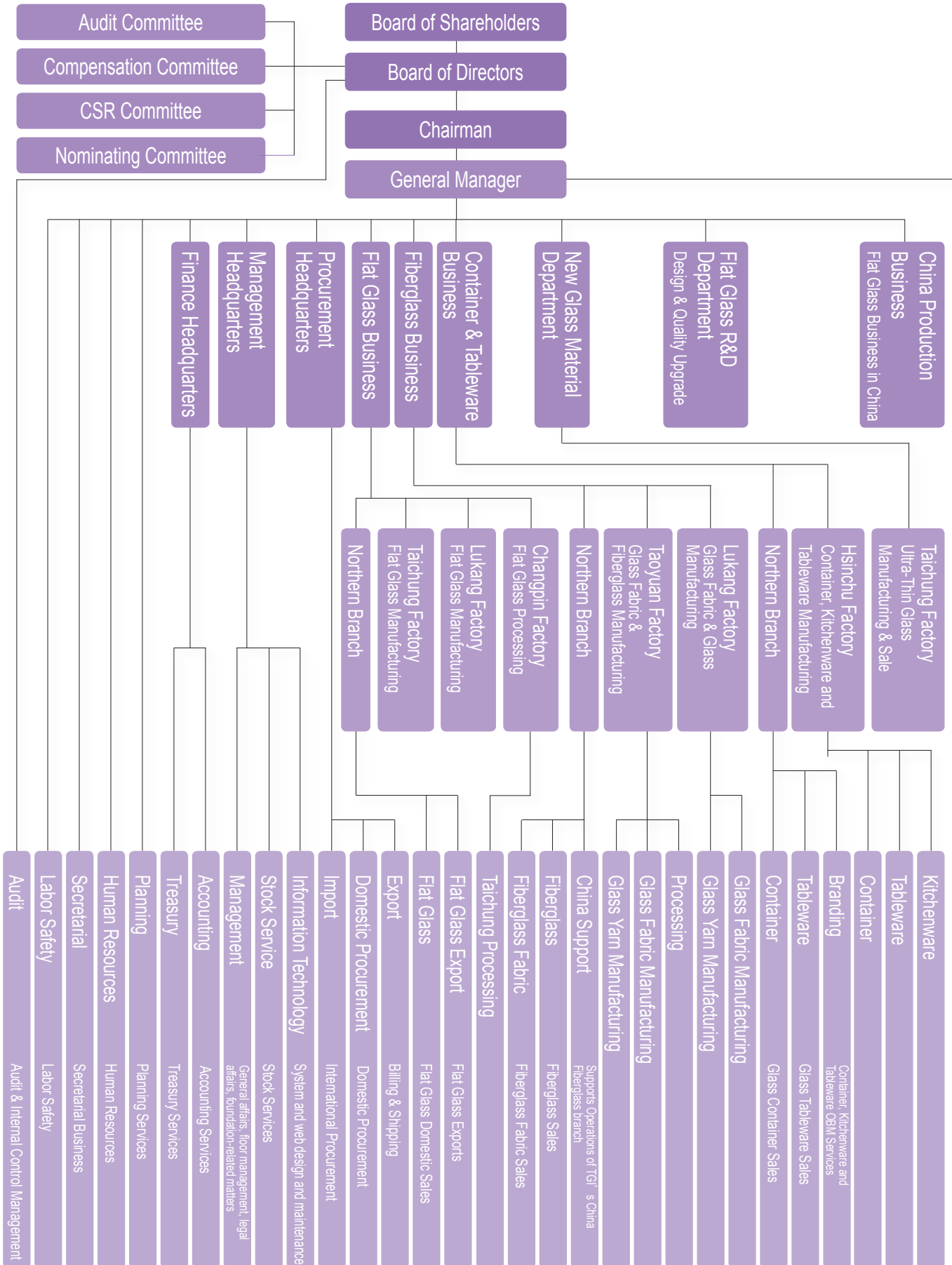


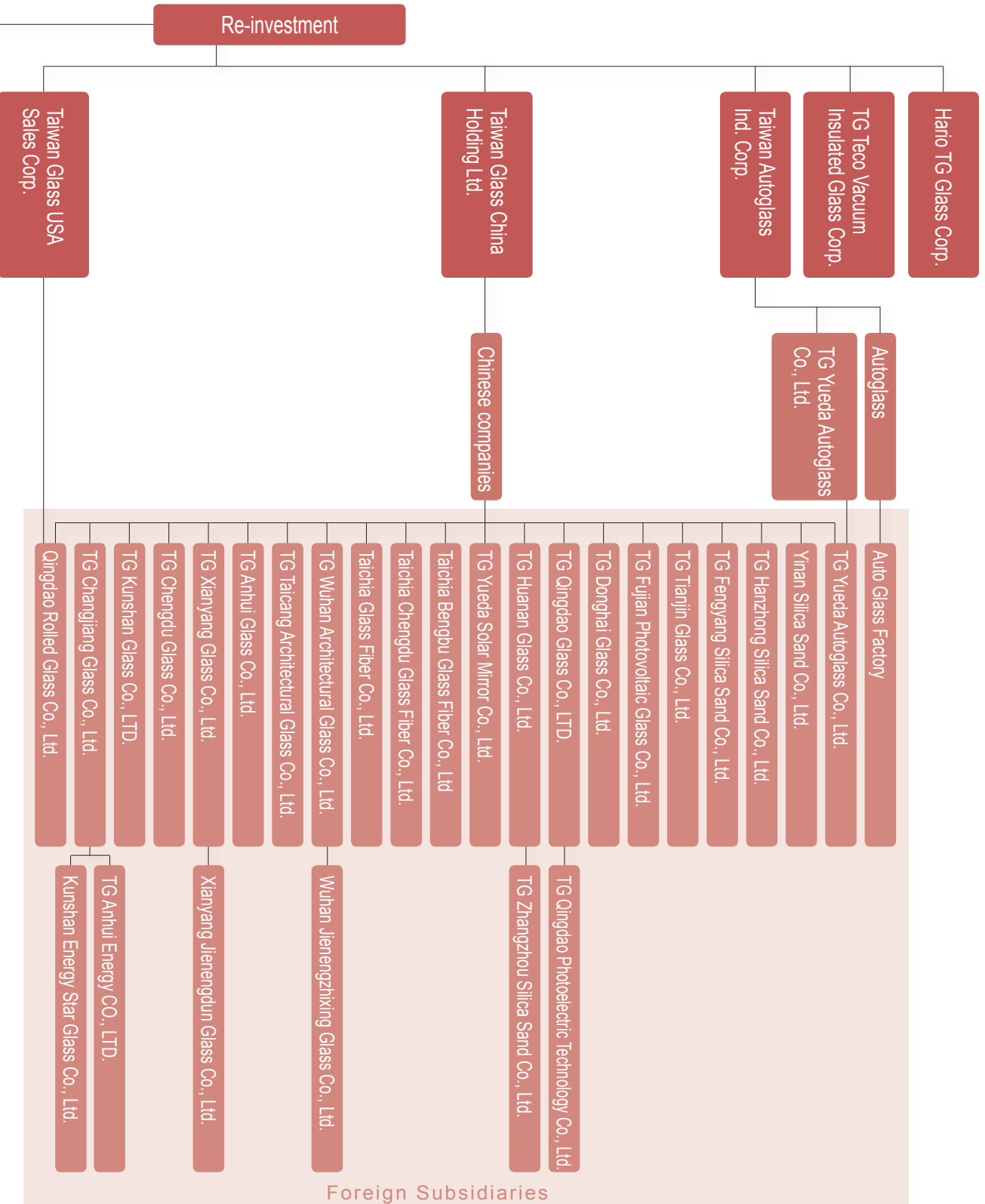
TGI Profile

TAIWAN GLASS IND. CORP.	
Market	Oversea Chinese/foreign investment/publicly traded, TWSE listed company
Stock Code	1802, Taiwan Glass Ind. Corp.
Industry	<ul style="list-style-type: none"> ➤ Manufacturing and sale of flat glass ➤ Manufacturing and sale of fiberglass fabric and fiberglass reinforced ➤ Manufacturing and sale of glassware
Founded on	August 25, 1964
Date of listing	July 15, 1973
Capital	NT\$29,080,608 thousand
Turnover	NT\$13,173,276 thousand
Number of employees	Employees in Taiwan:4,684
Headquarters	11F., Taiwan Glass Building, No.261, Sec. 3, Nanjing E. Rd., Songshan Dist., Taipei City 105, Taiwan (R.O.C.)



Management Team and Key Function of Departments





TGI Group Production Base Layout

01 TAIWAN GLASS IND.CORP.

FLAT GLASS

02 TAICHUNG FACTORY

03 CHANGPIN FACTORY

03-1TG TECO VACUUM INSULATED GLASS CORP.

04 TG QINGDAO GLASS CO., LTD.

05 TG CHANGJIANG GLASS CO., LTD.

06 TG KUNSHAN GLASS CO., LTD.

07 TG CHENGDU GLASS CO., LTD.

08 TG HUANAN GLASS CO., LTD.

09 TG DONGHAI GLASS CO., LTD.

10 TG TIANJIN GLASS CO., LTD.

11 TG XIANYANG GLASS CO., LTD.

12 TG TAICANG ARCHITECTURAL GLASS CO., LTD.

13 TG ANHUI GLASS CO., LTD.

14 TG WUHAN ARCHITECTURAL GLASS CO., LTD.

15 QINGDAO ROLLED GLASS CO., LTD.

16 LUKANG FLAT GLASS FACTORY

FIBERGLASS REINFORCED, FIBERGLASS FABRIC

16 LUKANG FACTORY

17 TAOYUAN FACTORY

18 TAICHIA GLASS FIBER CO., LTD.

19 TAICHIA CHENGDU GLASS FIBER CO., LTD.

20 TAICHIA BENGBU GLASS FIBER CO., LTD.

ULTRA-THIN GLASS

21 TAICHUNG ULTRA-THIN GLASS FACTORY

PHOTOELECTRIC GLASS

22 TG FUJIAN PHOTOVOLTAIC GLASS CO., LTD.

23 TG YUEDA SOLAR MIRROR CO., LTD.

GLASS CONTAINER, TABLEWARE & KITCHENWARE

24 HSINCHU FACTORY

24-1HARIO TG GLASS CORP.

AUTOMOTIVE GLASS

25 TAIWAN AUTOGLASS IND. CORP.

26 TG YUEDA AUTOGLASS CO., LTD.

SILICA SAND

27 TG HANZHONG SILICA SAND CO., LTD.

28 TG FENGYANG SILICA SAND CO., LTD.

29 YINAN SILICA SAND CO., LTD.

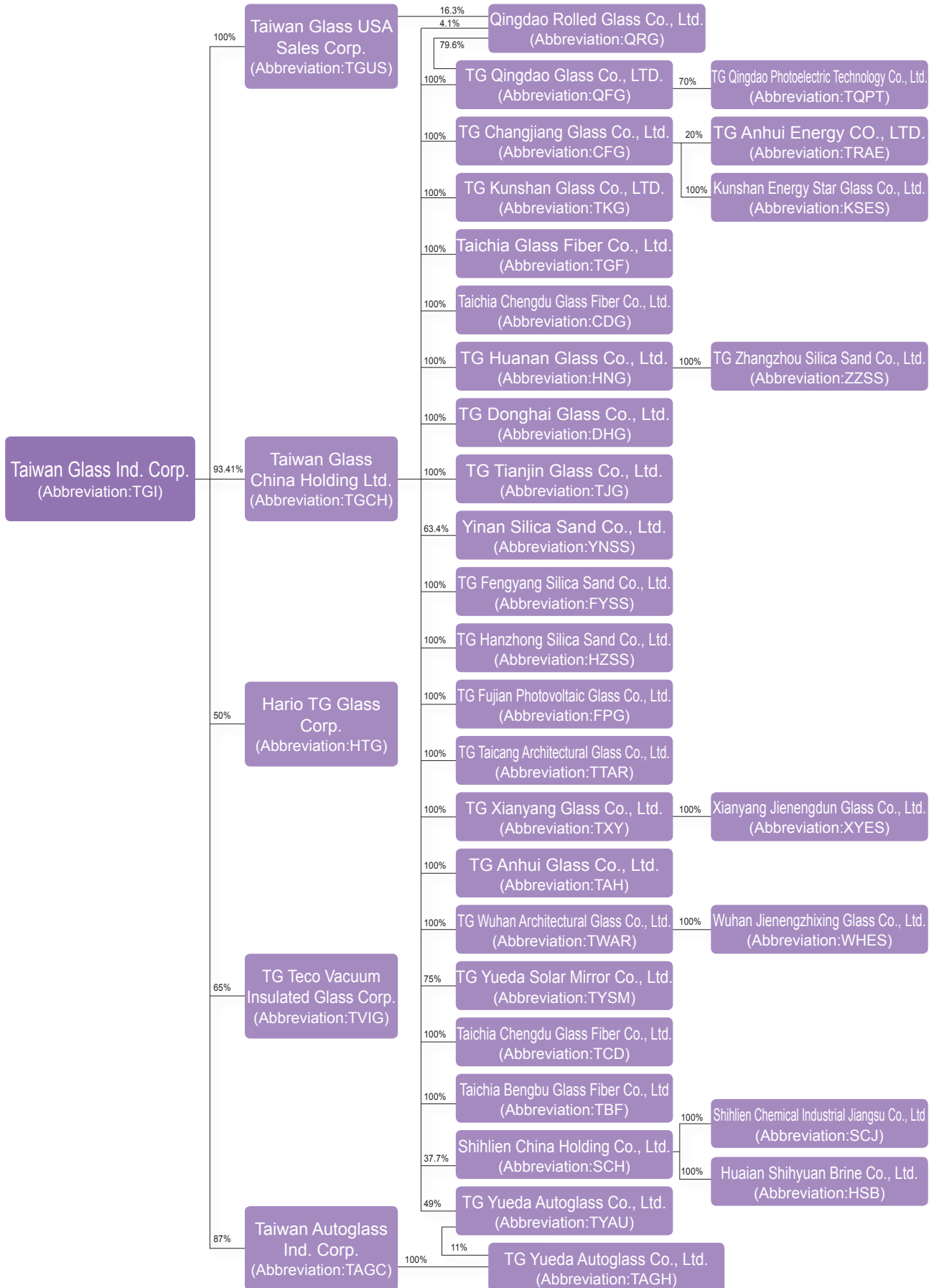
30 TG ZHANGZHOU SILICA SAND CO., LTD.

SODA ASH

31 SHIHLIEN CHEMICAL INDUSTRIAL JIANGSU CO., LTD.

32 HUAIAN SHIHYUAN BRINE CO., LTD.

TGI Affiliates



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About TGI



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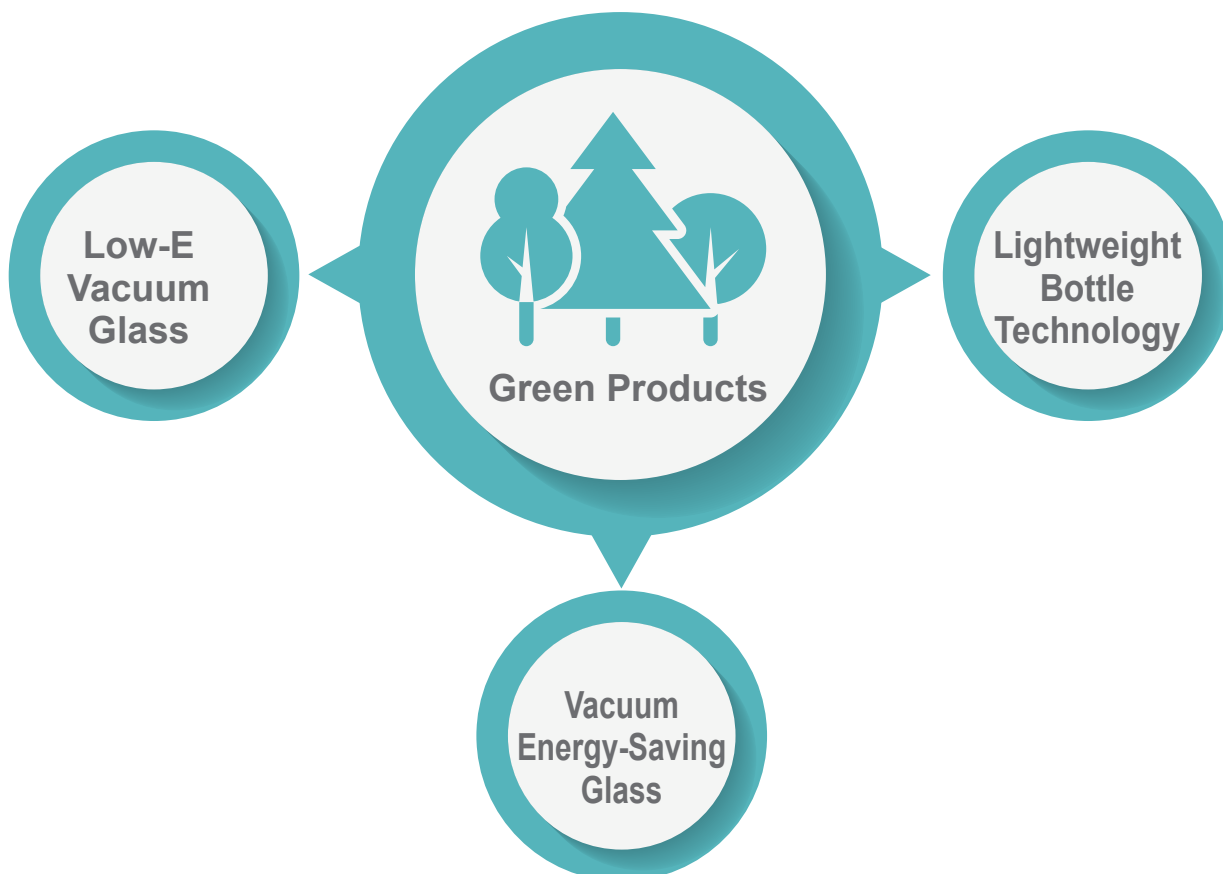
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Appendix

Main Business and Products

Division	Product Category
Flat Glass Division	<ul style="list-style-type: none"> ➤ Clear Float Glass ➤ Tinted Float Glass ➤ Rolled Glass ➤ Low-E Glass ➤ Low-E Vacuum Glass ➤ Reflective Glass ➤ Tempered Glass ➤ Ceramic Silkscreen/Spandrel Glass ➤ Heat Strengthened Glass ➤ Laminated Glass/Sound Control Laminated Glass ➤ Bent Glass/Bent Tempered Glass ➤ Silver Mirror
New Material Business	<ul style="list-style-type: none"> ➤ Electronic Grade Ultra-Thin Glass
Solar Business	<ul style="list-style-type: none"> ➤ Super Clear Glass ➤ Low Iron Photovoltaic Cover Glass
Automotive Glass Business	<ul style="list-style-type: none"> ➤ Automotive Glass
Fiber Glass Business	<ul style="list-style-type: none"> ➤ Fiberglass Reinforced ➤ Fiberglass Yarn ➤ Fiberglass Fabric
Container, Tableware & Kitchenware	<ul style="list-style-type: none"> ➤ Glass Container ➤ Tableware ➤ Kitchenware ➤ Tableware/Kitchenware Glass Processing
Salt Chemical	<ul style="list-style-type: none"> ➤ Soda Ash ➤ Ammonium Chloride



TGI Group draws world-class technology and equipment suppliers and accumulates its own R&D experience to make efforts in technology improvement and new product research and development. In addition to obtaining a number of quality and environmental certificates, in response to global green energy issues, TGI reduces pollution from the production process to mitigate environmental impact and devotes to develop environmental and energy saving related products.

Participating Organizations

TGI is actively involved in national organizations and commercial enterprises, cross-strait exchanges, regional economic and trade, industry associations and other sustainable and environment-related organizations, hoping to interact with other companies in the industrial and help one another grow by participating in various activities.



4th of 24th Member General Conference of Chinese National Association of Industry and Commerce, Taiwan

Organization	Title
1. Industrial and Commercial Enterprise Groups	
Chinese National Association of Industry and Commerce	Chairman
Chinese National Federation of Industries	Director
Taiwan Chamber of Commerce & Industry	Director
The Third Wednesday Club	Vice Chairman
2. Cross-strait Exchange Organizations	
Straits Exchange Foundation	Director
Straits Economics & Cultural Interchange Association	Managing Director
Cross-Strait CEO Summit	Director
3. Regional Economic and Trade Organization	
Chinese Association for Reinforced Plastic	Director
Chinese International Economic Cooperation Association	Member
Taiwan-African Business Association	Member
4. Industry-Related Associations	
Taiwan Glass Industry Association	Chairperson of the board of supervisors
Taiwan Photovoltaic Industry Association	Member

Organization	Title
Taiwan Flat Panel Display Materials & Devices Association	Member
Taiwan Green Building Material Council	Member
Chung-Hwa Railway Industry Development Association	Member
Taiwan Fire Safety & Material Association	Member
Taiwan Composites Association	Managing Director
Taiwan Weaving Industry Association	Member
Chinese Association for Industrial Technology Advancement	Member
Hsinchu City Industrial Association	Member
Taichung Harbor Related Industrial Park	Member
Lukang Changhua Coastal Industrial Park	Member
Taiwan Printed Circuit Association	Member
5. Environmentally Sustainable Development Related Organizations	
Center for Corporate Sustainability	Advisory Director
Taiwan Green Building Council	Member

2.2 Operating Information

Sustainable Development Strategy Management Policy



Importance

The founder of TGI upholds the idea of building an autonomous, high-quality glass industry in Taiwan. Under the joint efforts of building colleagues and colleagues, it strives to create a solid foundation for the professional manufacturer of glass industry. Since its founding, it has been committed to providing outstanding quality, reasonable prices, impeccable services to satisfy customers, reward shareholders, take care of employees, and contribute to society.



Policy and Commitment

Under the versatile boom, TGI must assure it has well competition conditions. TGI devotes itself to cultivate great persons, develop high unit price products, boost operation management, strength channel layout, and marketing service and carry out corporate social responsibility including economy, environmental protection, labor care and products responsibilities, making progress and boom to the corporate as well as society. TGI expects to implement sustainable operation by achieving the goal of financial structure strengthened and business development.



Action Method

Through the establishment of the “Corporate Social Responsibility Committee” , we plan for ESG-oriented and comprehensive considerations. We will continue to introduce new technologies, expand the operation, and continue to optimize our product and operation scale so as to enhance the sustainable development of TGI.



Goals and targets

- Reduce operating costs.
- Optimize and improve the production line process structure.
- Strengthen access and services.



Objective evaluation

➤ Flat Glass

Automation technology and equipment increase the added value of products and establish a global brand positioning. TGI has completed the marketing channel supplier system, and continued promoting Low-E energy-saving glass, and cooperated with domestic environmental protection policies and industrial development. TGI has created a niche by establishing the research and development of energy-saving and advanced building materials such as Super Clear glass, Ultra-thin glass, and photoelectric technology,

➤ Fiberglass

With the vigorous development of emerging applications in mobile devices, automotive electronics, and the internet of things, it will also stimulate the demand for fiberglass and price growth. In the future, TGI will continue to grasp market trends and supply for high-end customer product areas. Currently, more lightweight products have been successfully developed and prepared to enter mass production.

➤ New Material

Imported computerized automatic production management system, clean room, and robotic arm collection equipment; meanwhile TGI has started to supply the product of high-level car mirror regularly since it obtained formal orders in 2017 after sampling to get the certificate.

➤ Container & Tableware & Kitchenware

Regarding the private brand development, to create product and market differentiation, TGI has commissioned a Japanese artist of industrial design, to design products of our private brand with simple and good texture. The quality and production efficiency of TGI’ s tableware has been promoted by updating its furnace and equipment. Furthermore, TGI provides clients with various choices with customized multi-printing and packaging processing abilities and combines with other industrial products to apply to marketing.



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Appendix

Our Philosophy

TGI has upheld its belief in building high performance by laying a steady operation strategy, a global macro perspective, and a solid and sound financial basis.

Our Goal

TGI will provide outstanding quality, reasonable prices and impeccable services to satisfy customers, reward shareholders, take care of employees and contribute to society.

Our Quality Policy

TGI will continue to implement advanced technologies and company-wide quality management to provide our clients with satisfying products.

Financial Information

Items/Year	2015	2016	2017
Operating revenue	13,073,437	12,952,715	13,173,276
Operating costs	10,968,357	10,367,981	10,777,756
Gross profit	2,105,080	2,584,734	2,395,520
Operating expenses	1,982,880	1,999,422	2,019,522
Operating income (profit and loss)	122,200	585,312	375,998
Non-operating income and expenses	(4,778,584)	(2,168,231)	1,797,118
Profit before tax	(4,656,384)	(1,582,919)	2,173,116
Net income from continuing operations (Net income or loss after tax)	(4,687,597)	(1,641,685)	2,123,773
Other comprehensive income (loss)	(1,648,449)	(3,297,667)	(135,333)
Total comprehensive income (loss)	(6,336,046)	(4,939,352)	1,988,440
EPS (NT\$) (Adjusted retroactively)	(1.97)	(0.62)	0.73
Personal expenditure	2,781,393	2,829,337	3,070,707
Financial contribution to the Government (Taxes, donations, fees)	41,892	62,822	58,810

Note 1 : All figures have been audited and certified by a CPA.

2 : The company has adopted the International Financial Reporting Standards since 2013.

Government Research Subsidies

1. Ministry of Economic Affairs Division specialized industry plan :

Project Title	Description	Period	Funds (Unit: thousand NTD)
High-speed high-frequency board material - low dielectric constant fiberglass fabric development plan	In cooperation with the Industrial Technology Research Institute to develop high-speed high-frequency board material - low dielectric constant fiberglass fabric.	2015/09/01~ 2017/02/28	Project total subsidy : NTD 20,000 thousand As of December 2017, the project was granted a total of NTD 20,000 thousand in subsidy.

2. In accordance with the Statute for Upgrading Industries, exempted from business income tax for five years (2014-2018): application of TGI' s factories are Changpin Factory, Hsinchu Furnace TS-7, and Taoyuan Furnace TT-1.

Production and Sales

TGI Group 2017 Annual Capacity for Each Product						
Product	Taiwan		China		Total	
	Furnaces	Tons	Furnaces	Tons	Furnaces	Tons
Float glass	2	340,000	12	3,084,000	14	3,424,000
Ultra-thin glass	1	21,480	-	-	1	21,480
Photovoltaic cover glass	-	-	1	219,000	1	219,000
Solar mirror	-	-	1	72,000	1	72,000
Rolled glass	-	-	1	33,000	1	33,000
Glass fabric	2	25,000	5	86,000	7	111,000
FRP fiberglass reinforced	2	75,000	-	-	2	75,000
Glass container	5	170,000	-	-	5	170,000
Glass tableware/ kitchenware	2	10,000	-	-	2	10,000
Total	14	641,480	20	3,494,000	34	4,135,480



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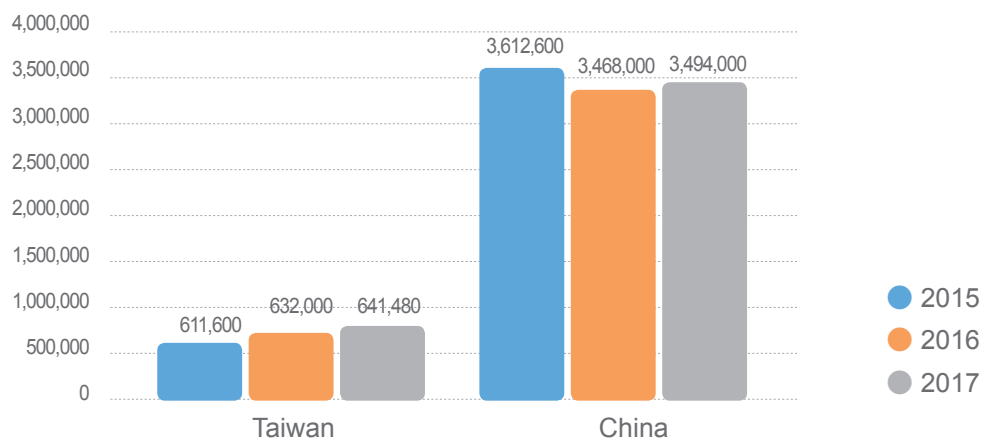


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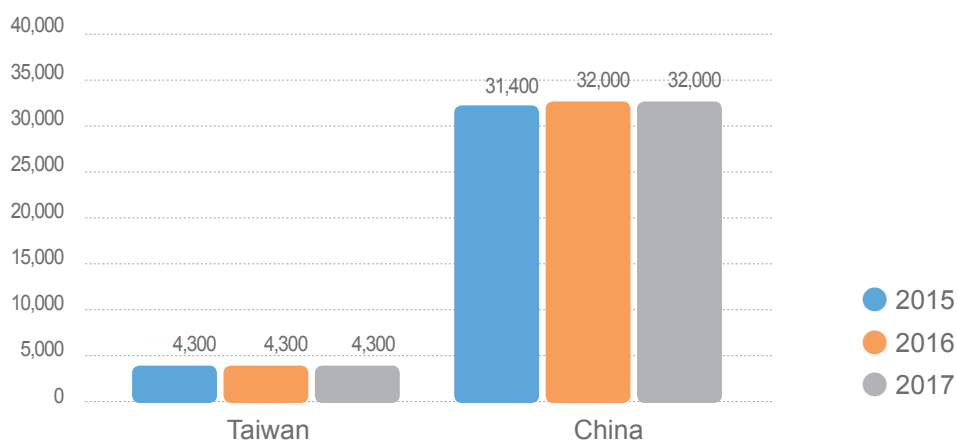
Annual Production Capacity of TGI Group



TGI Group's Total Production Capacity of Low-E

Product	Taiwan		China		Total	
	Production line	1,000 M ²	Production line	1,000 M ²	Production line	1,000 M ²
Low-E glass	1	4,000	8	32,000	9	36,000
Low-E vacuum glass	1	300	-	-	1	300
Total	2	4,300	8	32,000	10	36,300

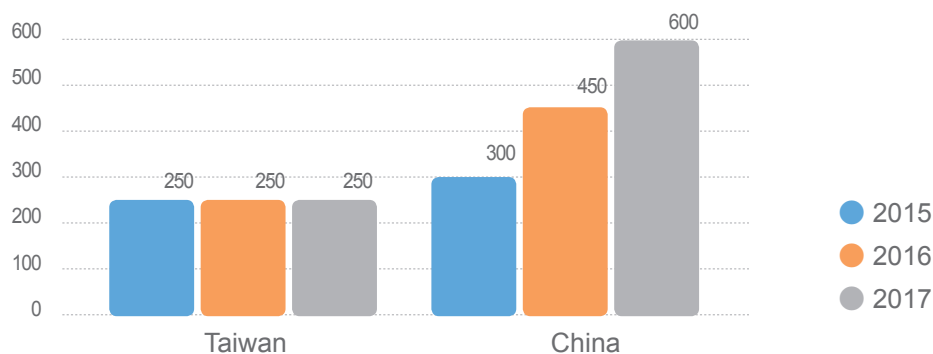
TGI Group's Total Production Capacity of Low-E (1,000 M²)



TGI Group's Total Production Capacity of Automotive Glass

Product	Taiwan		China		Total	
	Production line	Thousand cars	Production line	Thousand cars	Production line	Thousand cars
Automotive glass	1	250	4	600	5	850

TGI Group' s Total Production Capacity of Automotive Glass (Thousand cars)



Sales Information

Sale Information of Main Products in 2017

Serial number	Product category	Ratio of domestic sales	Ratio of export sales	Sales share	Sale areas	Clients
1	Flat glass	90% (including cooperative export)	10%	66%	Asia, Central & South America, Australia, Europe, Africa and North America.	Construction industry, architects, designers
2	Fiberglass Fabric and Fiberglass	41%	59%	26%	Europe, USA, China, Japan, South Korea, Middle-East, Southeast Asia, New Zealand and Australia.	Composite hull, construction, corrosion-resistant engineering, engineering plastics, sports equipment, electrical and electronic equipment, transportation tools, aerospace military
3	Glass container	52%	48%	7%	USA, New Zealand, Australia, China, and Germany.	Wholesale and retail industry
4	Glass tableware	75%	25%	0%	India, South Korea, Germany, and Australia.	
	Glass kitchenware	20%	80%	1%	China	
5	New material-Ultra-thin glass	5%	95%	0%	China	Electronic industry



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Appendix

Domestic Market Share in 2017

Serial number	Product category	Market share
1	Flat glass	About 80% of the domestic market
2	Fiberglass Fabric	About 35% of the domestic market
3	Fiberglass	About 55% of the domestic market
4	Glass container	About 35% of the domestic market
5	Glass tableware/kitchenware	About 35% of the domestic market
6	New material- Ultra-thin glass	About 10% of the China market

2.3 Corporate Governance

Corporate Governance Management Policy



Importance

TGI upholds the philosophy of sustainable development, pays attention to shareholders' rights and interests and takes care of employees. We also give back to society, effectively manage and implement the board of directors and improve the foundation of corporate governance. Our corporate governance focused on operational development, continuously enhancing our competitiveness, and providing transparent information for all stakeholders to understand and reference so as to enhance the company's operational value.



Policy and Commitment

"Honest Business" is always TGI' score principle and the most fundamental commitment and responsibility that we promise to give all stakeholders. Transparent management creates stable profits and sustainable operations.



Action Method

➤ Avoidance of Conflict of Interest


TGI's rules of procedures for meetings of its Board of Directors include clauses for the avoidance of conflict of interest for directors. Furthermore, this company has professional and unbiased independent directors to fully protect this company's interests.

➤ Anti-corruption

TGI has "Honest Business Principles" and "Employees' Honest Principles" and provides training to ensure that each employee understands these principles and shall not exploit their relationship for private business dealings or money.


➤ Complaints mechanism

TGI has a dedicated line, email address to which employees can file their complaints. There is also an email address on the company' s website that the public can use to file complaints or provide suggestions.



Goals and targets


Through methods such as avoidance of conflict of interest, anti-corruption, and complaints mechanism, it is hoped that risk management, regulation compliance, and honest business can be achieved to protect shareholders' rights and to implement the business philosophy.



Objective evaluation

- When the Audit Committee reviewed the 2018 audit plan in 2017, the attendees left the meeting and avoided the resolution, and the plan was passed by independent directors.
- In 2017, no employee of TGI was involved in corruption, bribery or extortion.
- As for the stakeholder opinions, all cases were dispatched and replied by the people in charge based on the questions and the contents of the appeals have been properly coordinated.

Regulation Compliance Management Policy




Importance

As a multinational company, the operation of the company is across the Asia-Pacific region. Therefore, the company must comply with the laws and regulations of many countries, confirm the most important regulatory compliance issues for the company, and establish a corresponding compliance system to avoid the company's business risks. In addition, it is more important to be able to protect the employees' basic labor rights.




Policy and Commitment

TGI has Legal Department and Audit Department to ensure that all units' operations comply with environmental, labor safety, product and any related regulations and Labor Standards Act. We offer education and training to help and ensure that each employee understands related rules and regulations., while also committed to complying with the government's environmental protection policy.



Action Method

- Conduct internal employee training of government laws and regulations, strengthen labor actability, and identify, respond to and follow the regulations.
- Establish steps for governmental regulations to ensure compliance with statutory requirements.



Goals and targets

- No material regulatory violation (where the fine exceeds NT\$1 million)
- Periodically hosting annual Labor-Management Meeting and orientation and training for newcomers.



Objective evaluation

- There was no major violation of the law in 2017.
- The annual Labor-Management Meeting and orientation and training for newcomers were all held as scheduled in 2017.

Board of Directors

TGI adheres to transparent operations, focusing on shareholders' equity, and believes that a sound and efficient Board of Directors is an excellent foundation for corporate governance. We believe that good corporate governance builds a solid foundation for the operation and development of the market to provide high-quality products and services while enhancing the long-term value of the company. The main corporate governance policies are the "publicly traded corporate governance code of practice" and relevant laws and norms apply. Under these principles, TGI board of directors has authorized to establish the Audit Committee, Remuneration Committee, CSR Committee and Nomination Committee to assist the Board of Directors



in fulfilling its supervisory duties. Articles of Association of the committees are approved by the Board of Directors, the Chairman of the Committee's report on its activities and decisions to the Board of Directors on a regular basis.

Board Members

TGI 2017 Board of Directors included 15 directors. Each director, supervisor and legal person/ representative has rich academic or business operation experience. Among them, 3 were independent directors. TGI' s sustainability relies on these directors' rich knowledge, insight and sense of business. Each director has a 3-year term, elected by the shareholders' meeting from among the persons with disposing capacity. Directors may be eligible for re-election. A chairman of the board of directors shall be elected from among the directors. The chairman will lead the board of directors on behalf of the company. Taiwan Glass' chairman does not serve as the company' s CEO concurrently. The board meeting is held at least once in each quarter and TGI held 7 board meetings in 2017. There are two types of shareholder meetings: regular and special. Regular shareholder meetings are held at least once a year, convened by the board of directors based on the law within six months after the close of each fiscal year. Special shareholder meetings are held based on the law when necessary.

TGI Board members					
Title	Name	Gender	Job Title/Experience	Concurrent Position at TGI	2017 board of directors Actual attendance
Chairman	Lin, Por Fong	Male	TGI General Manager	None	7
Director	Lin, Por Shih	Male	TGI Managing Director	TGI General Manager	4
Director	Lin, Por Chain	Male	TGI Managing Director	None	4
Director	Yun San Corporation Chang, Po Shin	Male	Chairman, Chang Hwa Bank	None	3
Director	Lim, Han Ton	Male	Chairman, Bo Chi Investment	None	6
Director	Lim Ken Seng Kah Kih Corp. Hsu, Li Lin	Female	Sunrise Department Store General Manager	None	7
Director	Tai Feng Investment Su, Yu Te	Male	GM, Fiber	COO, Fiber	7
Director	Tai Feng Investment Lin, Chia Hung	Male	GM, China Prod.	COO, China Prod.	2
Director	Tai Feng Investment Lin, Chia Yu	Male	VGM, Fiber	GM, Fiber	5
Director	Tai Chien Investment Lin, Charles Ming	Male	VGM, Finance	GM, Finance	6
Director	Ho Ho Investment Chen, Cheng Chang	Male	Plant Director, Lukang Factory	Project VGM, Lukang Factory	3
Director	Ho Ho Investment Lin, Bao Tsuen (2017-10-25 resignation)	Male	Plant VGM, Taichung Factory	GM, New Glass	6
Director	Ho Ho Investment Tsai, Tseng Ming (2017-10-26 appointment)	Male	VGM of Purchasing Department	VGM of Purchasing Department	1
Independent director	Lin, Fong Cheng	Male	Minister of the Interior	None	6
Independent director	Chen, Ching Chih	Male	Chairman, Wan Hai Lines	None	7
Independent director	Hwang, Tsing Yuan	Male	Director, TWSE	None	7

Note: 12 directors over the age of 50; 3 directors between 30 and 50.



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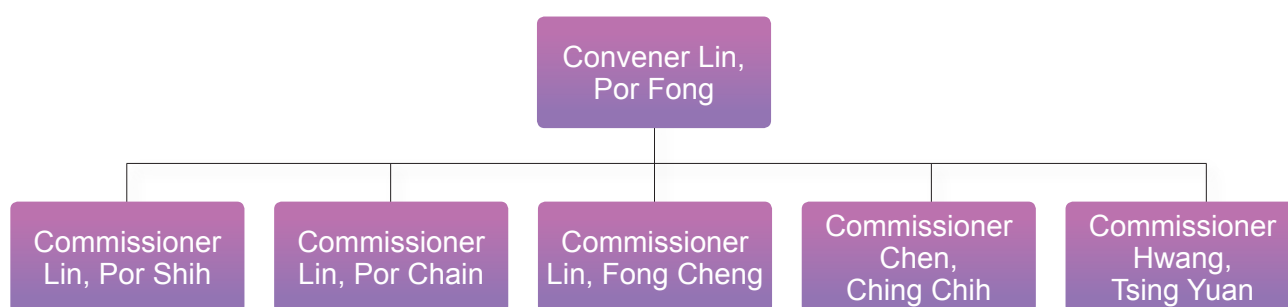
Duties of the Board of Directors

The Board of Directors is the center of the company's major decisions. The Board of Directors is responsible for hiring and supervising the company's management as well as the company's overall performance. The Board of Directors' second responsibility is guiding the management team. TGI's Board of Directors listens to the management team's reports periodically, which also cover economic and environmental protection issues. The Board of Directors also spends a lot of time communicating with the management, which has to propose company strategies to the Board of Directors. The Board of Directors evaluates the feasibility of these strategies, keeps track of their progress and urges the management team to make adjustments when needed.

Nominating Committee

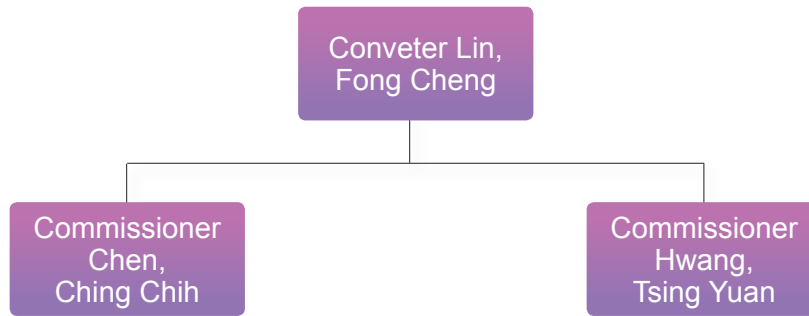
To establish a healthy nomination system, TGI, following Item 3 of Article 27 of Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies, established the Nominating Committee in 2016. The committee is authorized by the Board of Directors to seek, review and nominate director candidates as well as build and develop the structure of the board of directors to ensure a healthy Board of Directors.

In accordance with the company law and the company's articles of incorporation, TGI has established a method for the selection of directors, adopts a nomination system for candidates and a registered voting method. The names of the electors can be replaced by the shareholders' numbers, and the shareholders are elected from the list of director candidates. In order to achieve a sustainable and balanced development and an increasingly diversified Board of Directors, we set up a Nominating Committee to consider various aspects of diversity of board members when setting up a board composition, including but not limited to gender, age, cultural and educational background, ethnicity, Professional experience, skills, and knowledge and service terms.



The Audit Committee

For the establishment of good corporate governance, under regulations for prescribed public company audit, the committee exercises of authority. With effect from August 2015, all the members of the audit committee are independent directors, and at least one of whom must have accounting or financial expertise.



Remuneration Committee

To establish a healthy remuneration system for the directors and managers in TGI, the Remuneration Committee was established following the Regulations Governing the Appointment and Exercise of Powers by the Remuneration Committee of a Company Whose Stock is Listed on the Stock Exchange or Traded over the Counter. This committee serves to professionally and objectively evaluate the remuneration policy and system for TGI's directors and managers and make suggestions to the Board of Directors as needed. The committee regularly reviews its organizational procedure, annual/long-term performance objectives for the directors and managers and their remuneration policy, system, standards and structures and the performances of the directors and managers. The committee will propose the remuneration for each director and manager for TGI's reference in policymaking.

In 2017, two Remuneration Committee meetings were held to discuss "Compensation of the Directors and Managerial Officers of TGI in 2016", "Cash Capital Increase and Employees Stock Plan of TGI in 2016", and "Amendment of 'Regulations Governing Compensation of the Directors and Managerial Officers'".

The committee should manage trust business with great prudence, faithfully perform the following duties, and submit the proposal to the board for discussion:

1. Regularly review the organization procedures of the Committee and propose amendments.
2. To formulate and periodically review the annual and long-term performance targets and compensation policies, systems, standards and structures of directors and managers.
3. Regularly assess the achievement of performance targets of directors and managers, and determine the content and amount of their individual compensation.

When the Committee performs the functions and powers mentioned in the preceding paragraph, it shall adopt the following principles:

1. Ensure that the company's salary and remuneration arrangements are in compliance with relevant laws and regulations and are sufficient to attract talents.
2. Performance appraisal of directors, supervisors and managers and salary remuneration should be based on the usual level of support provided by the industry, and consider the time invested by individuals, their responsibilities, the achievement of personal goals, the performance of other positions, and the company's performance in recent years. Salary and remuneration of peers in the same position, the achievement of short-term and long-term business goals of the company, and the financial status of the company are used to assess the relevance of individual performance and company operating performance

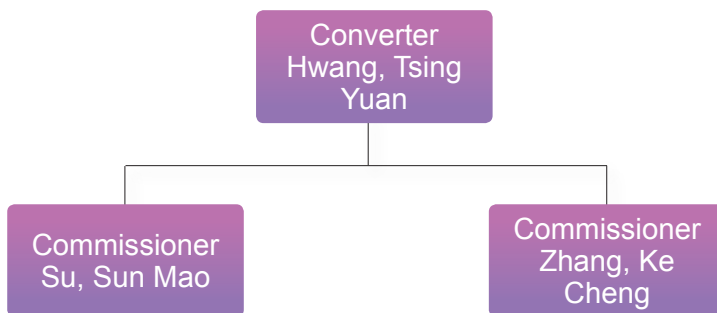
and future risks.

3. Directors and managers should not be encouraged to engage in risk overtaking of the company in pursuit of salary compensation.

4. The proportion of short-term dividends paid to directors and senior managers and the timing of payment for partial changes in salary payments should be determined by considering the nature of the industry and the nature of the company's business.

5. Members of this Committee may not join the discussion and vote on their decisions regarding personal compensation.

The salary and remuneration referred to in the preceding two items includes cash compensation, share options, dividends, retirement benefits or termination payments, various allowances and other measures that have substantial incentives; its scope should be consistent with the guidelines for recordable items in the annual report of public offering companies. The remuneration of directors, supervisors and managers is the same. The salary policy of the third item is that the company has not directly consulted interested parties in 2017, and will consider the participation of interested parties in the future and include it as a reference record.



*Note : Please visit TGI' s official website for the organizational procedures and duties of the Nomination Committee, Audit Committee and Remuneration Committee.



Internal Audit Department

The Internal Audit Department (IAD) of TGI is an independent unit under the board of directors. IAD has a suitable number of eligible auditors who, in addition to regular presentations during the board meetings, report to the chairman, supervisors and independent directors on a regular basis or when necessary. In 2017, a total of 37 internal audits were conducted. There were no major anomalies in the audit results. This company has its own Internal Audit Implementation Rules, based on which the IDA reviews and assesses the company' s internal control system, business performance, and efficiency. The IDA then offers timely suggestions for improvement to ensure that the internal control system is implemented continuously and effectively. Its scope of audit covers all operations of this company and our subsidiaries. The IAD mainly conducts audits based on the audit plan passed by the board of directors. The audit plan is based on recognized risks. The IAD also conducts an audit on a case-by-case base when necessary. The self-inspection results, the internal control flaws and any matters that need improvement discovered by the IAD will be as a reference in the evaluation of the internal control system' s effectiveness and the foundation of Management' s Reports on Internal Control.

Avoidance of Conflict of Interest

TGI's rules of procedures for meetings of its Board of Directors include clauses for the avoidance of conflict of interest for directors. If any director or a juristic person represented by a director is an interested party with respect to any agenda item, the director may express his/her opinions and answer questions at the respective meeting. When the relationship is likely to prejudice the interests of the company, the director may not participate in discussion or voting on that agenda item, and further, shall enter recusal during discussion and voting on that item and may not act as another director's proxy to exercise voting rights on that matter. Furthermore, this company has professional and unbiased independent directors, who offer unbiased and objective suggestions based on their expertise and experience as the company formulates strategies. The Board of Directors will fully consider the independent directors' opinions when discussing any agendas. Any reasons or opinions for agreement or objection will be recorded while staying in line with the principle of avoidance of conflict of interest to fully protect this company's interests.

Anti-corruption

TGI has "Honest Business Principles" and "Employees' Honest Principles" and provides trainings to new recruits to ensure that each employee understands these principles.

- (1) Where there is a meal invitation between manufacturers or they offer gifts, these should be declined on principle.
- (2) If invited to dinner entertainment, this should be reported; if offered accepting gifts or money, these should be reported and handed over for official handling the same day.
- (3) The employee shall not exploit their relationship with manufacturers for private business dealings or money.

員工執行職務誠信守則

立書人(以下簡稱本人)服務於台灣玻璃工業股份有限公司(以下稱「公司」)，於任職期間，應遵守員工工作規則及以下誠信規範，並以客觀、公正及誠實的方式執行業務、善盡職責。

1. 有關業務洽辦，一切以公司利益為優先，來往廠商倘有邀宴或饋贈行為，應以婉拒為原則，如受邀宴應酬，應先報准；收受金錢禮品，應即轉報處理。
2. 不得直接或間接提供、承諾、要求或收受任何不正當利益，或做出其他違反誠信、不法或違背受託義務等不誠信行為，所謂利益係指任何有價值之事物，包括任何形式或名義之金錢、報酬、佣金、職位、服務、優待、回扣等。
3. 如有違背上列事項，願負法律責任並賠償公司因此所受直接或間接之損失。

此 致
台灣玻璃工業股份有限公司 鈞鑒

立書人

姓 名：_____ (簽名)

服務單位：_____ 廠部 _____ 課

日 期：_____ 年 _____ 月 _____ 日

TG 2015-10

Employee's Honest Principles

*Note : Please visit TGI's official website for TGI's Honest Business Principles.





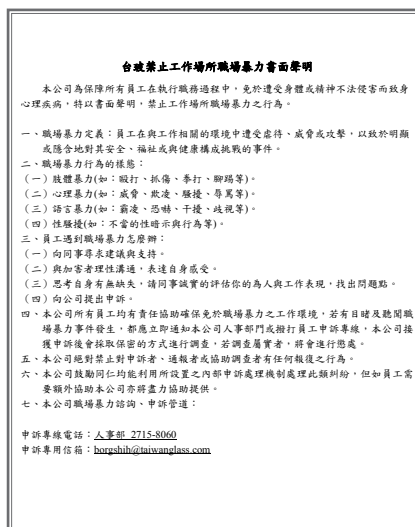
In 2017, no employee of TGI was involved in corruption, bribery or extortion. Any donations or sponsorships from TGI to other parties will be processed according to relevant laws and regulations as well as the company's internal rules to prevent bribery or illegal political donations. TGI did not make any political donations in 2017.

Complaints mechanism

As TGI pursues growth, the company has, as an honest business, established its accounting and internal control systems to ensure that all operations in the company stay in line with relevant laws and regulations. This company has a dedicated line, email address to which employees can file their complaints. There is also an email address on the company's website that the public can use to file complaints or provide suggestions. TGI has both internal and external complaints consultation procedures as follows:

1. Internal staff can download a staff complaint form from the company's internal bulletin. All the detailed supporting information should be attached. Spurious and unfounded or blackmailing complaints are strictly prohibited. Complaints shall be treated in a confidential manner. Depending on the type of problem the complaint, the complaints will be delivered to the relevant departments (personnel, audit, legal units, etc.) directly, or will be sent by personnel for response. The complaints can be sent directly to corporate headquarters.

2. Please follow the email addresses listed in the contact information on the TGI website and submit inquiries to the responsible department based on the type of the inquiry.



Workplace Violence Policy Statement



Internal Complaint mechanism



External complaint mechanism

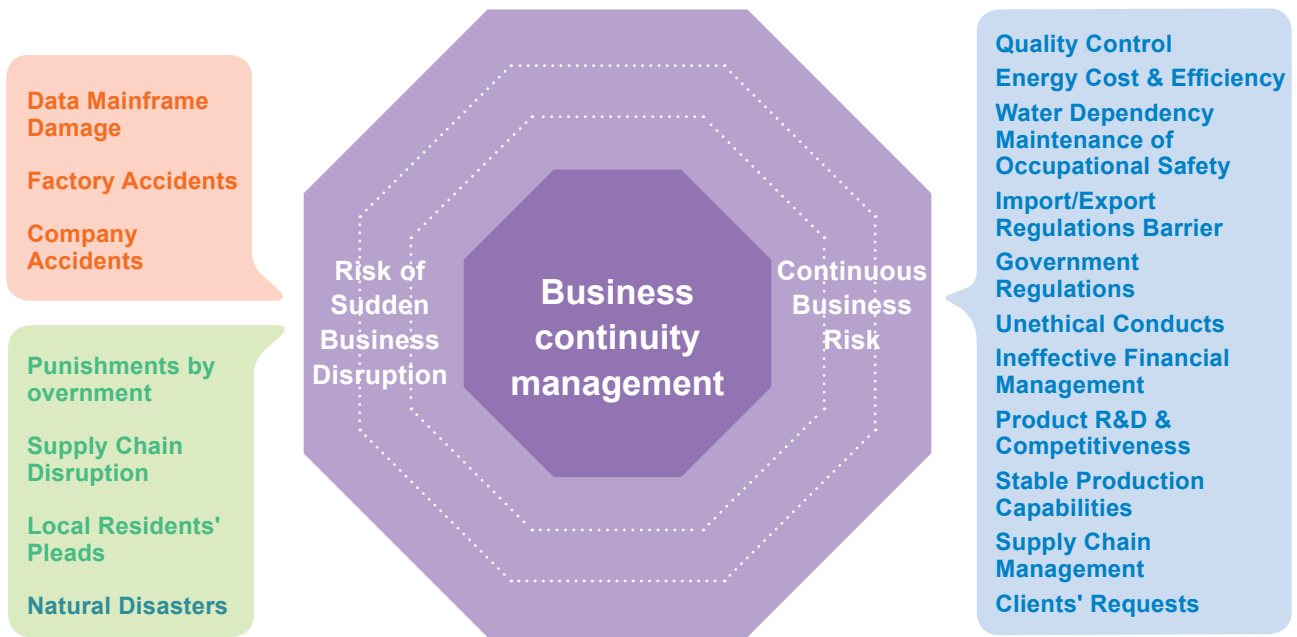
2.4 Risk Management

Risk Management Management Policy

 <p>Importance</p>	<p>In order to avoid additional losses, TGI strives to reduce operational risks and establish sound risk management operations based on various possible risks.</p>
 <p>Policy and Commitment</p>	<p>According to various issues, TGI assigns relevant departments to regularly inspect and manage, and proposes improvement measures to ensure the recurrence rate of identified risks, and strengthens preventive measures to reduce the shock and impact.</p>
 <p>Action Method</p>	<ul style="list-style-type: none"> ➤ Arrange related education and training to ensure that all employees have full knowledge of possible risks. ➤ Arrange related emergency drills to improve the response.
 <p>Goals and targets</p>	<p>Conduct preliminary risk assessment and plan prevention strategies for important types of environmental and security emergencies.</p>
 <p>Objective evaluation</p>	<ul style="list-style-type: none"> ➤ Prior risk assessments for critical emergencies and possible strategies for planning crisis prevention events were evaluated. ➤ Quality, environment, and safety were all complied with the management system to implement risk assessment. ➤ Regularly implemented fire drills and other risk management courses, such as general education of hazardous chemicals, self-defense fire marshaling training, etc. ➤ Regularly conducted fire drills and conduct drills on various contingency entities, such as molten glass leakage emergency response drills, wastewater overflow emergency response drills, and heavy/diesel tanker loading and unloading emergency response drills.

To prevent risk to the continuous operation or sudden disruption of operation, TGI has all departments conduct comprehensive risk evaluations and reviews periodically, implement various planned risk management measures for a sound and comprehensive risk management. The risk management involves lowering the possibility and reducing the impacts of recognized risks. Lowering business risk exposure, improving crisis management and sustainability are the objectives of risk management.





Countermeasures for Risk Management		
Category	Risk	Impacts and countermeasures/ Response
Financial risk	Funding risk	Prepare bank financing quotas and negotiate with banks for more favorable financing rates to reduce funding costs and maintain the normal operation of the company's funds.
	Liquidity management risk	Increase interest income on liquidity and ensure the profit and integrity of liquidity.
	Interest rate risk	We always maintain a good financial structure, as a financial institution and negotiating favorable bargaining chips, and in close contact with the banks in order to obtain more favorable borrowing rates.
	Exchange rate change risk	Due to the non-functional currency of the purchase or sales of the risk arising to netting, our exchange rate risk is not significant.
	Inflation	No significant impact on our Company.
	<ul style="list-style-type: none"> ➤ High risk and highly leveraged investment ➤ Loans to others ➤ Endorsements and Guarantees 	In 2017 we had no high risk and highly leveraged investment, and no loans to others. Only the loans and endorsements to our subsidiaries in China were implemented for construction and working capital.

Category	Risk	Impacts and countermeasures/ Response
Operational risk	Regulatory risk	<p>Through the update of monthly inspection on laws and regulations, we check whether TGI is in compliance with all the relevant laws and regulations.</p> <p>In 2017, the new legal internal control system was added. Since internal control requirements became strict, management methods such as contract review were incorporated into the system. After the contract was electronicized, a legal review was passed.</p> <p>For example, GHG emissions reporting and management law, the three regulations of water saving, labor disputes, and factory safety accidents.</p>
	Cost risk	<p>We estimate the impact of the ordinance on the cost of TGI and analyze the potential savings in expenditures and costs. For example, the water surcharge, the supply and safety of products and raw materials, and the impact of internationalization on the supply of raw materials and competition. The production department changed the original pumped motor water supply to the factory water pressure supply, which has been improved. It is expected that the water consumption is 3% less than in 2016.</p>
	Client complaint risk	<p>There is product insurance every year, and premiums and content are increased year by year.</p>
	Off-The-Shelf risk	<p>The US FDA is rigorous and increases the risk of product failure. In 2017, we planned to increase the number of insurance projects in order to reduce the impact of the risk of unloading the shelves.</p>
	Natural disaster risk	<p>Observe the impact of climate risk and focus on current events to understand what may have happened and follow the treatment prescribed by the ISO 14001 (8-ES-B10) emergency response.</p> <p>For example: News reports of drought or floods.</p>
	Information security risk	<p>TGI backed up numerous data and confidential documents on a daily basis. Various permissions are set in the system to ensure that information is not exposed and used by appropriate personnel.</p>
	Human resources risk	<p>To attract and retain talents in the form of an annual salary increase, to implement pay raise in 2017, and expect to raise salary again in 2018. Introduced into the HR system in 2017, in response to the risk of system downtime and data loss.</p>



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Category	Risk	Impacts and countermeasures/ Response
Operational risk	Raw material risk	<p>Glass production is very sensitive to even the slightest change in formula. The materials going into the kiln must be monitored carefully because incorrect formula will lead to major losses.</p> <p>Risk</p> <ul style="list-style-type: none"> ➤ Material misplaced in the wrong silo <p>Risk Occurred</p> <ul style="list-style-type: none"> ➤ Wrong formulate resulted in unqualified glass <p>Countermeasures</p> <ul style="list-style-type: none"> ➤ Fully implement material storage control ➤ Enhance staff training ➤ Store raw materials in an isolated and consistent location ➤ Include names and inspection results in the labelings
	Environmental security and health risk	<p>To prepare for any environmental or security emergency, the Engineering Safety Section should formulate an emergency response plan and conduct an investigation when incidents occur. The Factory Affairs Section should plan training sessions and have all departments collaborate with the section. Each factory has its own emergency response plan for incidents such as fires, accidents in the wastewater treatment facilities, air pollution, oil or chemical leaks and explosions. The Engineering Safety Section can revise the plan based on the circumstances in the factories.</p> <pre> graph TD S1[Situations occur] --> S2[Initiates the contingency plan] S2 --> D1{Determines if the incident can be contained effectively and immediately} D1 -- yes --> E1[Ends the contingency plan as the disaster has been contained] D1 -- no --> S3[Operator or security guards will conduct the emergency broadcast and contact the authorities] S3 --> S4[Establish an emergency response team which will be in charge of initiating the contingency plan] S4 --> D2{Determines if the incident can be contained effectively and immediately} D2 -- yes --> E1 D2 -- no --> S5[Request for external support] S5 --> S6[Contain the disaster] S6 --> E1 E1 --> S7[Review] </pre>

2.5 Contribute to the society

To give back to the society, TGI founded Taiwan Glass Foundation which participates in charitable activities all over Taiwan. This foundation aims to bring the community closer, promote school development, assist communities and encourage TGI' s own employees to participate in charitable activities to give back to the society. In addition to taking actions to give back to the society, the foundation also leads and encourages other organizations to participate in charitable activities to make our society a better place.



2017 Taiwan Glass Scholarship Presentation Ceremony

Taiwan Glass Foundation Past Activities (by year)

Year	Activity	Location	Descriptions
2017	Scholarship	Taipei City	80 students awarded scholarships, each issued NTD 10,000.
2016	Scholarship	Taipei City	140 students awarded scholarships, each issued NTD 10,000.
2015	Scholarship	Taipei City	140 students awarded scholarships, each issued NTD 10,000.
2014	Scholarship	Taipei City	129 students awarded scholarships, each issued NTD 10,000.
2013	Scholarship	Taipei City	143 students awarded scholarships, each issued NTD 10,000.
	Culture & Art	Taipei City	131 Beautiful Taiwan (Taiwan from the Air) movie tickets.
2012	Scholarship	Taipei City	196 students awarded scholarships, each issued NTD 10,000.
	Art Exhibition	Taipei City	Co-organized and sponsored “Alvaro Siza: The Beauty of Function”
2011	Scholarship	Taipei City	180 students awarded scholarships, each issued NTD 10,000.
	Art Exhibition	Taipei City	Co-organized and sponsored “Alvaro Siza: The Beauty of Function”
2010	Scholarship	Taipei City	160 students awarded scholarships, each issued NTD 10,000.
	Movie Premiere	Taipei City	Co-organized special screening for “Let the Wind Carry Me” with 200 attendants. TG used this opportunity to promote excellent Taiwanese movies and develop more talents in the movie industry.
	Green Building Lecture	Taipei City	“Taipei Beautiful: Green Building Lecture” : 300 participants. TG worked with Department of Urban Development, Taipei City Government on this urban renewal plan. In addition to renovating old houses, this project also aims to make buildings more environment-friendly.



Donations in 2017

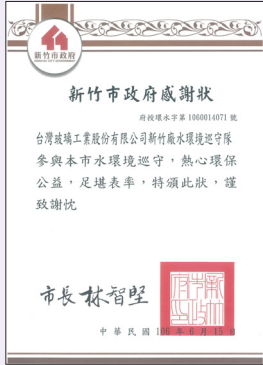

Prioritization	Organization Title	Total Donation (NTD)
1	Chinese National Association of Industry and Commerce	1,700,000
2	Taiwan Glass Industry Association	345,500
3	Mennonite Social Welfare Foundation*	299,983
4	Taiwan Institute for Sustainable Energy	280,000
5	Taipei Glass Commercial Association	215,000
6	Straits Economic & Culture Interchange Association	80,000
7	National Taiwan University of Sport*	73,463
8	Management Institute in Taipei	60,000
9	Waseda University Alumni in Taiwan	50,000
10	Taiwan Glass Commercial Association	50,000
11	Hsinchu Glass Commercial Association	44,000
12	Keelung Glass Commercial Association	42,000
13	Kaohsiung Glass Commercial Association	30,000
14	Kaohsiung Glass Commercial Association	30,000
15	Taipei City Glass Assembly Craft Association	24,000
16	Chinese National Federation of Industries	20,000
17	Changhua County Glass Commercial Association	20,000
18	Tainan City Glass Commercial Association	20,000
19	Taichung City Glass Commercial Association	20,000
20	New Taipei City Glass Commercial Association	20,000
21	Hualian County Glass Commercial Association	20,000
22	Chiayi City Glass Commercial Association	20,000
23	Taoyuan City Glass Commercial Association	20,000
24	Changhua County Glass Assembly Professional Union	12,000
25	Tainan City Glass Professional Union	12,000
26	Taichung City Glass Assembly Professional Union	12,000
27	Tainan City Glass Assembly Professional Union	12,000
28	Taiwan Golf & Country Club	3,000
Total		3,534,946

Note: “*” indicates recipients of glass products

TGI Charity (all factories)

In addition to the head office of the social care and other activities, TGI constantly strengthen the establishment of coexistence with local friendly relations, rooted in the present and for years the idea of sustainable local, positive feedback place to do your neighbor, green environment, priority into the local population in order to create employment opportunities for local economic prosperity. To enhance the corporate image and create a value of the green plant, we made the employees a comfortable working environment. By involving in the industrial area of green landscaping adoption activities, we hope to make a contribution to the local area's green environment. In addition, TGI is willing to sponsor companies' products to schools or associations in the community. As a result, there has been no conflict with community residents in 2017.



<p>Joined the Hsinchu City River Patrol</p>	<p>Hsinchu Factory adopted the section of the Shan-Shin River from the Da-Zuan bridge to the ocean. The company is responsible for patrolling the river regularly every month to keep it clean.</p>	
<p>2017 World Oceans Day – Beach Cleansing</p>	<p>TGI is committed to protecting the marine environment and has been awarded a certificate of appreciation by the Hsinchu City Government.</p>	
<p>Hsinchu Factory Labor Union Donation</p>	<p>The 12th session of the Hsinchu Factory distributed the remaining materials of the conference and donated them to charities to pass love.</p>	

2017Changhua Outstanding Employees with Disabilities

Lukang Factory and Lukang Flat Glass Factory are dedicated to improving the working space and equipment and providing a quality work environment for people with disabilities.



Sponsorship of Wuqi Elementary/ Junior High School

Taichung Factory sponsors the souvenir of the Wuqi Elementary School Sports Association in the community and the career exploration camp of Wuqi Junior High School.



Sponsorship of Taichung Harbor Judo Museum

Taichung Factory sponsors the Taichung Harbor Judo Museum to promote the national judo sportsmanship.



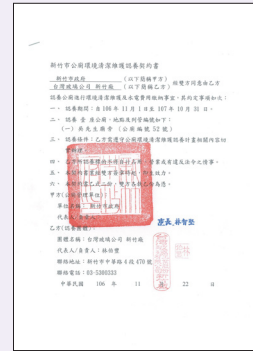
Sponsor Bullet-proof Glass and Participate in the Friends of Police in Changhua

Bulletproof glass is sent to Changhua Lukang Branch Xiushui Police Station for duty station.



Public Toilets Maintenance

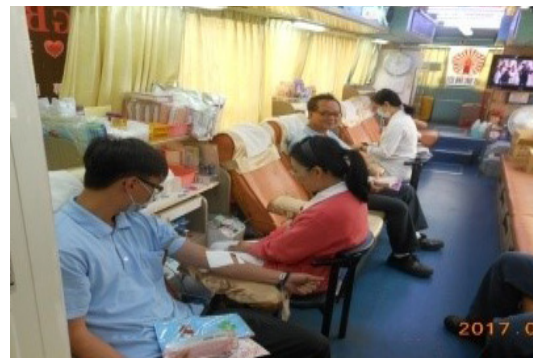
Hsinchu Factory has joined the Hsinchu City Government's public toilets maintenance and carries out cleaning and maintenance every week.



Blood Donation

“Give blood, save lives” is a principle that TGI can identify with when it comes to giving back to the society. The Taichung Factory, Lukang Factory, Lukang Flat Glass Factory and Changpin Factory all held blood donation in 2017. Among them, the Lukang Factory and Lukang Flat Glass Factory hold blood donation with the Taichung Blood Center, with prizes sponsored by Lions Club International to encourage employees to donate blood. The two factories aim to lead as an example to encourage all TGI employees to give blood and save lives. In 2017, TGI’s factories donated a total of 392 bags of blood.

The Taichung Factory



Lukang Factory/Lukang Flat Glass Factory



Changpin Factory



Chapter

3

Quality TGI

- 3.1 Product Introduction
- 3.2 Product Quality Management
- 3.3 Innovation and R&D
- 3.4 Customer Service
- 3.5 Sustainable Supply Chain



Achievements of Product Performance and Accountability in 2017

0 violations

No violations in health and safety of products, labeling, and marketing regulations.

100 %

100 % of flat glass products passed EU CE, US ANSI, Taiwan CNS and other relevant standards.

100 %

Fiberglass products were 100% compliant with RoHS and REACH specifications.

-30 %

Low-E products can reduce 30% of air conditioner usage and energy consumption.

100 %

100% of glass food container products met Taiwan food container and packaging hygiene standards, and all factories met FSSC 22000 certification for environmental protection and food safety.

-12.5 %

Lightweight bottle technology reduces 12.5% of product weight and is 100% recyclable.

ISO 50001

Hsinchu Factory obtained the certificate of ISO 50001 Energy Management Systems in 2017.

0 violations

TGI did not receive any complaint regarding client privacy violation or loss of client data.

14 certifications

For food contact products, 4 products passed FDA regulations. 8 passed EU 10/2011 and Germany' s BfR certification for drinking water and 2 products met France' s CAS requirements for drinking water.



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AGR certified

TGI' s heat-resistant borosilicate bottle is certified by America Glass Research with leading quality among Asian countries.

80 %

In 2017 the average satisfaction of all departments in customer surveys is above 80%.

3.1 Product Introduction

TGI' s main products include flat glass, fiberglass, and glassware. There was no any violation of regulations related to product health & safety, labeling and marketing and no product' s sale was prohibited in 2017.

Flat glass is one of the core products of TGI. With production plants based in Taiwan and China, TGI's major markets reach Taiwan, China, Japan, Korea, North America, Middle East, Australia, Europe, South Africa and so forth. TGI was not involved in any anti-competitive behavior, anti-trust and monopoly practices or legal proceedings in 2017.

Flat Glass



Fiberglass



Container, tableware & kitchenware



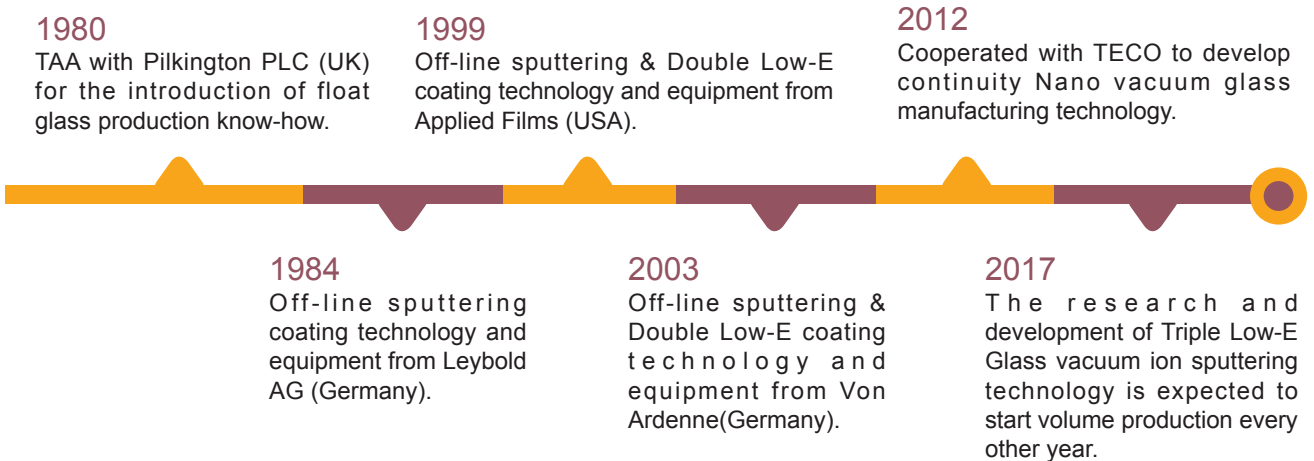
Note: For product details, please scan the respective QR Code with your smartphone.

Flat glass

TGI' s flat glass has 100% passed the EU CE, US ANSI, Taiwan CNS and other relevant standards. In the production of the flat silver mirror, TGI uses an advanced lead-free copper process to avoid heavy metal pollution. TGI also actively promotes the hot-dip process to strengthen glass. Even if it is

broken, it will become small pieces to reduce harm. Laminated Glass has the PVB interlayer withstands penetration from an impact. Even if the glass cracks, splinters will adhere to the interlayer and not scatter. In comparison with other kinds of glass, laminated glass has the much higher strength to resist shock, burglary, burst, and bullets. Cladding, coating, vacuum and other energy-saving glass have more excellent thermal insulation so it can reduce the heat exchange of indoor and outdoor to save air conditioning usage which indirectly reduces greenhouse gas emissions.

Technical cooperation



Flat Glass Related Certification



Green Product - Flat Glass

The new generation of energy-saving Low-E glass products can effectively block the radiation from sunlight while allowing most sunlight to enter, which solves the problem of lighting and heat insulation. This product also significantly reduces energy consumption from air conditioners. TGI' s Low-E glass products are in compliance with CNS12681 standard and certified with ISO 9001 standard and IGCC. Currently, the product has been vastly used in buildings.

TGI actively promotes the green building concept. The Low-E Glass can reduce 30% energy consumption of air-conditioning, and Low-E vacuum energy-saving glass insulation performance is 4-6 times of ordinary glass chip. The energy-saving products can better conserve energy than other industrial products. Therefore energy-saving buildings will become a key to the energy conservation energy of the country.





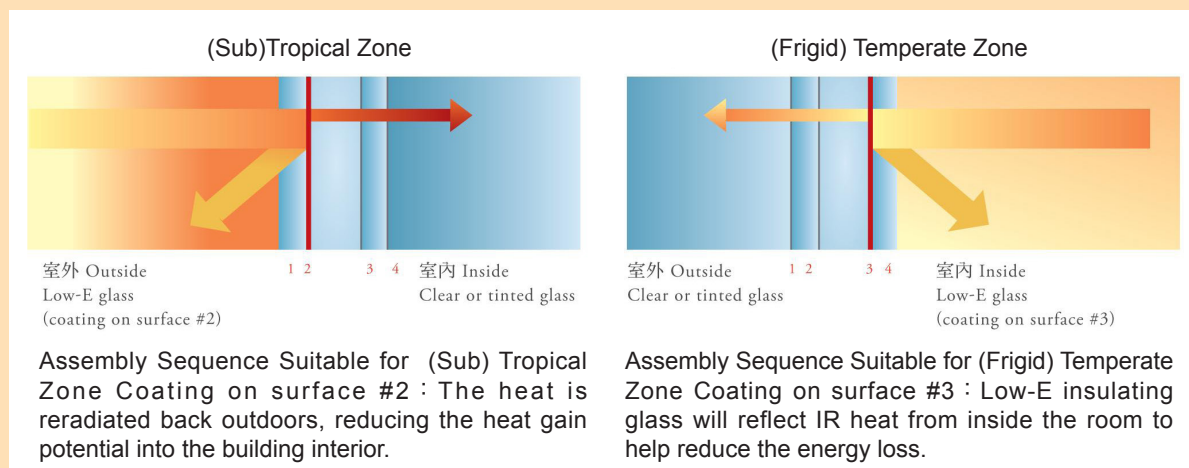
TGI's Information

What is Low-E Glass?

Low-E (Low-Emissivity) glass is the best building material to reduce heat from sunlight as it can deflect most ultraviolet and infrared radiation, preventing the indoor temperature from rising, conserving energy and reducing carbon emission.

Thermal radiation from the sun mainly contains ultraviolet, visible light and infrared radiation. Emissivity (ϵ value, the lower the value, the higher the effectiveness for heat insulation) is glass' ability to emit heat radiation from the sun.

Low-E glass utilizes its coating to block the heat radiation from the sun. According to China' s Guobiao standards, only coated glass with emissivity (ϵ value) lower than 0.25 can be labeled as Low-E glass.



*Note:Emissivity value: The value measures an object' s ability to emit heat radiation after absorbing it. The higher the value, the higher the ability to absorb and emit heat; the lower the value, the lower the ability to absorb and emit heat, which means better heat insulation.

Fiberglass

Our Fiberglass Department actively promotes the application of fiberglass in daily life products. Compared to metal supporters, fiberglass has better resistance to corrosion and elements. Fiberglass is low-cost, more durable and has a great strength/weight ratio. Different types of fiberglass, based on their structures and features, are extensively used in thermal insulation, heat insulation, fireproof material, and reinforcement.

TGI' s fiberglass products all meet RoHS and REACH requirements. For food contact products, a total of 4 meet US FDA standards; 8 meet EU 10/2011 regulation and have Germany' s BfR approval; 2 meet France' s requirements for drinking water (CAS). The quality of our products meets CNS national standards. We print the CNS logos on labels according to different customer requirements. The packaging labels of fiberglass fabric and fiberglass yarn are marked with RoHS compliance logos.



Glass container, tableware, and kitchenware

Glass containers, with excellent transparency, showcase the real color of anything inside the container. They also have the advantages of easy sealing and flavor preservation. Furthermore, glass containers can be heated up gradually without deforming. TGI's glass containers come in various shapes. A suitable container can further highlight your product's texture.

The manufacturing facility of the container, tableware, and kitchenware has received FSSC 22000 certification; moreover, it has obtained ISO 50001 in 2017.

All products meet Taiwan's Sanitation Standard for Food Utensils, Containers and Packages. TGI can also provide products that meet RoHS and REACH standards based on clients' requests. For our heat-resistant products, all of our baby feeding bottles meet EU's latest EN 14350 standard. All of our coffee pots come with heat-resistant labeling. TGI has established a waste glass recycling factory where waste glass is cleaned and recycled. This company periodically sends samples from this factory to SGS to test for lead content. Due to an increase in export-share, TGI has a USD 5,000,000 global product liability insurance covering all the products.



Green Products - Glassware

TGI began acquiring German NNPB glass-blowing technology in 1983 in order to meet the needs of the market and enhance environmental protection. This technology produces attractive, lightweight bottles of uniform thickness. More recently, TGI has participated in technological cooperation with Germany's Heye-Glass Group, producing more than 200 million bottles per year. Lightweight bottles are the product of future trends in the glass container market. Besides helping customers cut production costs, lightweight bottles are environmentally friendly, as their production consumes fewer resources and energy.



Advantages of Lightweight Bottle

- Conserves raw materials use. It has the same strength despite a thinner bottle wall
- Reduces energy consumption
- Reduces clients' production costs
- Glass containers are 100% recyclable and will not destroy the earth's ecological environment



Original weight – 540g

Reduced weight – 480g

Example: 1-liter liqueur bottle originally weighed 540g. After the implementation of the NNPB technology, the bottle weighs 480g, 12.5% lighter.

Asia's top quality heat-resistant baby feeding bottle

Starting on June 1, 2011, China banned the baby bottles containing bisphenol A, which is also regulated in countries worldwide. TGI container factory started the production of heat-resistant borosilicate bottles from April of 2013. These bottles have the CTE of 33, which is certified by AGR (American Glass Research) with leading quality in Asia.

3.2 Product Quality Management

Product Quality Management Policy



Importance

TGI, as the leader in the glass industry in Taiwan, aims to provide good quality and reliable products to clients and to protect the interests of customers as the first priority. All products are equipped with related certification, governmental or global recognition for quality, safety in manufacturing and food safety.

Policy and Commitment

Besides economic growth improvement, the environmental and social sustainability as well as risks reduction are also TGI' s policy and commitment. Therefore, TGI actively introduces product quality, product safety, environment & health, and transportation security systems in order to keep upgrading product quality and related risks countermeasures.

Action Method

Obtain system certification of each product line in order to improve product quality.

Goals and targets

- Keep obtaining and maintaining the quality management systems, CNS and ANSI of each product line
- Keep obtaining each product certification of electronic grade thin glass.

Objective evaluation

- Taoyuan Factory and Hsinchu Factory have completed the ISO 50001 Energy Management System
- Acquire international car mirror factory product certification
- After the glass fiber production line obtained ISO/TS 16949:2009 certification, the demand for TGI's fiberglass fabric has grown significantly in response to the automotive circuit board in 2017.

To achieve economic growth and prosperity, social prosperity and sustainable living environment, reduce the incidence of risk and its impact, TGI actively introduced systems of product quality, product safety, ESH, transportation security and risk management. Certifications for TGI' s factories are listed below:

Certification/ Factory	Headquarter	Taoyuan Factory	Hsinchu Factory	Taichung Factory	Lukang Factory	Lukang Flat Glass Factory	Changpin Factory
AEO	●	●	●	●	●	●	●
ISO 9001		●	●	●	●	●	●
ISO 14001		●	●	●	●	●	●
ISO 14064-1		●	●	●	●	●	
ISO 50001		●	●	●		●	
ISO/TS 16949		●					
FSSC 22000			●				

Note: ● refers to the factory has the related certificate

Quality Systems

Good quality management system gives a good product quality, meets customer needs, and improves economic efficiency. TGI's factories meet ISO 9001 quality management system certification. Flat glass products obtained CNS Certificate from Bureau of Standards, Metrology and Inspection, Green Building Material Certificate from Ministry of the Interior, Certificate of Australia CSI Safe Glass Certificate Authority and the Certificate of United States IGCC Multilayer Glass Certification Association. Fiberglass products have obtained Norway's DNV certification and Germany's GL certification. The Taoyuan Factory obtained the ISO/TS 16949 certification for quality management systems in 2016. The Changpin Factory submits their processed glass products for examination to maintain the certification by SGCC (tempered glass and laminated glass) and IGCC (insulating glass).



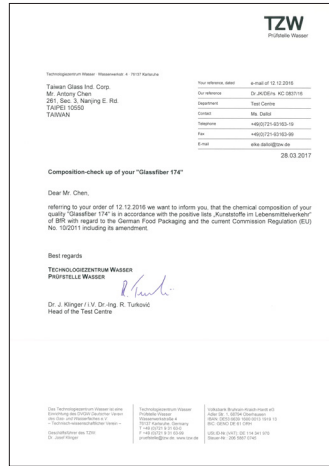
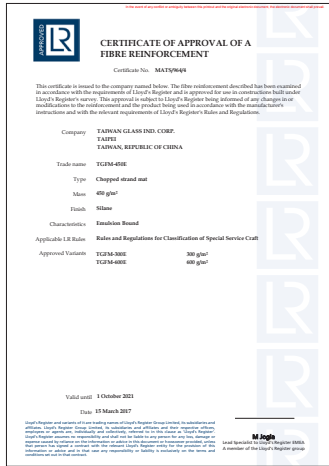
Environment, Health, and Safety System

TGI knows the importance of environmental protection and sustainability of the earth. In environmental management, all TGI's factories are certified with ISO14001 for environmental management and ISO 14064-1 for greenhouse gases (except Changpin Factory). In 2015, Taichung Factory established a committee of promoting greenhouse gas management to implement measures and report on these. It obtained third-party verification SGS compliance with ISO 14064-1: 2006 Greenhouse Gas review statement to achieve the target of waste reduction and protecting the global ecological environment effectively through ISO management procedure.



Product Health and Safety System

In recent years, tainted food incidents are quite common. To meet our clients' food safety requirements and to improve our international competitive advantages, since 2010, the Hsinchu Factory has actively imported ISO 22000 food safety management system for process hazard control. On March 7, 2011, it was SGS verified, and issued the 'FSSC 22000 food safety management system certificate'. The Taoyuan Factory also met Lloyd's Register product safety certification for shipbuilding and the TZW safety certificate for food container manufacturing.



Product Transport Safety System

In 2014, TGI was among the top 500 blue-chip manufacturers for import and export and was awarded Bureau of Foreign Trade's certification. TGI, as a partner, also helped Customs implement comprehensive supply chain security measures to obtain substantial and convenient customs clearances. On 19 April 2012, Taiwan glass obtained an AEO certification (for excellent enterprises with compliances) from the Keelung Customs Department. On April 19, 2015, the certificate was extended for another 3 years. Honored by Ministry of Finance for its outstanding contribution on May 10, 2016, TGI, with AEO supply chain safe measures, ensured a safe quality of TGI products throughout the entire supply chain. By improving the safety, TGI was able to reduce intellectual property loss and satisfy the safety requirements of both customs and clients.



Energy Management System

Global warming and climate change have become an important sustainable development issue. Greenhouse gas emission reduction has become important in each country. To fulfill the corporate social responsibility, TGI seeks to reduce greenhouse gas emissions, improve energy efficiency, and implement energy source management. In 2014 it began to introduce the ISO 50001: 2011 Energy Management System. In 2014, the Taichung Factory was certified and received the certificate from Bureau Veritas Certification Taiwan. The Hsinchu Factory and the Taoyuan Factory are also certified by Bureau Veritas Certification Taiwan in 2017.



Accounting Systems

The Company's financial report was prepared based on the FSC standards, recognized by the international financial reporting Associate, the International Accounting Standards, International Financial reporting interpretation and Interpretations establishment.



3.3 Innovation and R&D

Innovation and R&D Management Policy



Importance

TGI's technological process continues to break through innovations and maintains industry-leading standards in the fields of environmental protection, energy conservation, optoelectronics, lightweight, diversification, and actively develops green building materials related to high-quality and environmentally-friendly glass products. In order to protect the food safety of consumers, TGI strives to obtain various food safety certifications.

Various electronic product manufacturing processes are being developed toward lighter weight, expanding the application of fiberglass composite materials. Besides, coupled with the maturity of technology IoT applications, Netcom equipment, mobile devices, and emerging driverless cars, it will drive industrial fiberglass and electronic grade fiberglass fabric demand growth.



Policy and Commitment

We are committed to the improvement of technology and the research and development of new products, reducing the pollution of the production process, reducing the impact on the environment, and focusing on the development of environmental protection and energy-saving related products. In addition to establishing an internal innovation sharing mechanism and continuously strengthening the innovation dynamics of the organization, TGI also assists clients and industries in cross-domain innovation, including product innovation in cooperation with customers, and green innovation in cooperation with suppliers.



Action Method

- Develop thin, high-precision, high-strength fiberglass fabric
- Save energy and improve resource reuse rate
- Cooperate with academia to maintain research and development ability
- Alliance with industry to provide products that meet market demand



Goals and targets

- Promote ultra-thin fiberglass fabric
- Obtain ISO 50001 certification
- Cooperate with ITRI and National United University in Taiwan
- Improve the recycling rate of broken glass
- Communicate with customers and technicians, absorb new ideas and integrate them into know-how



Objective evaluation

- Ultra-thin fiberglass fabric won stable orders
- In November 2017, Taoyuan Factory and Hsinchu Factory obtained ISO 50001 certification
- Maintaining cooperative relations with ITRI, sending staff to National United University for education training, ordering periodicals, participating in exhibitions, and understanding the latest developments in the academic and industry sectors
- 17.21% recycle rate of flat glass and 49.28% of container cullet
- Continuing to communicate with customers and technicians, improving technical strength, and obviously increasing output and quality, as well as product value

The R&D expenses of TGI in 2017 was NT\$90,601,000. In order to strengthen innovative R&D capabilities, each product line, in addition to developing its own research and development technologies and equipment, also combines external R&D capabilities and resources, such as the cooperation with foreign R&D companies to develop high-aluminum glass to enhance its physical and chemical properties, as well as inviting foreign technicians to the factory to teach and introduce new production technologies.

In addition, TGI cooperated with China University of Science and Technology, Southern Taiwan University of Science and Technology, and Plastics Industry Development Center to research the application program of thermoplastic fiber composite materials. In 2017, TGI continued to upgrade its core technology and R&D capabilities. The key results are as follows:

Key Results	Description
Low-E glass coating protective tape testing	In 2017, the specification and type testing of protective tape with heat resistant and easy-to-be-removed adhesives was completed; protective tape is planned to be introduced into the laminated glass production line in 2018; the protective effect of each Low-E glass coating layer is continuously observed in terms of order specifications.
Low-E coating layer liquid protector testing	According to the oxidation time statistics of Low-E coating sample after exposure to air, the average time for anti-oxidation of the coated layer is 18.4 hours longer than the uncoated layer.
Post-temperable double Low-E glass new coating color development	In 2017, we continued developing 14 kinds of Post-temperable double Low-E glass products with new coating color for the coating process.
Alkali-Aluminosilicate Glass Patent	In 2012, TGI applied for an American formula patent and passed in 2017. (TGI has previously passed the Taiwan and Japanese patents.)
Fiberglass size development	TGI develops environmentally friendly fiberglass and size components, flat fiberglass size applications, and the low dielectric constant short fiberglass.


In order to motivate employees to actively provide opinions on production technology, quality, environmental protection, safety, or business administration, TGI provides a bonus for proposal improvement suggestion. For major research and development program, TGI will award project members bonuses as encouragement based on the research contribution and achievements. These improve the employee identification and solidarity, reduce costs, upgrade the working environment, and enhance productivity and quality standards. Special contributions to the production technology or business management are rewarded by giving credit.

Product Development




3.4 Customer Service

Customer Service Management Policy


Importance

For more than 50 years of operation, TGI has attached great importance to the opinions of its customers. Therefore, it is a prerequisite for gaining customers' recognition and trust, which is also an objective that we have been working hard every year.



Policy and Commitment

➤ **Glass Containers:**
We continue maintaining high customer satisfaction in order to obtain a sustainable competitive advantage. The product quality is the core factor makes TGI different from other competitors.

➤ **New glass materials:**
The first priority is to provide product for customers with satisfactory quality. TGI continue improving production conditions after bringing into production and purchasing additional inspection equipment to ensure the quality of the product we provide meets customer satisfaction.


➤ **Flat glass:**
Customer satisfaction and customer trust are the most important aspects of sustainable development. TGI improved its education and training, upgraded equipment maintenance, and enhanced professional services and production quality to strengthen its competitiveness.

➤ **Fiberglass:**
An assessment of the degree of satisfaction with the customer relationship during the transaction was conducted to facilitate the improvement plan and to enhance the customer's satisfaction.


Action Method

In order to keep close to the needs of customers and improve them, TGI regularly implements a "Customer Satisfaction Survey" every six months or year. The content covers 7 topics which are "complaints response speed", " message feedback - correctness", " message feedback - promptness", "business attitude", "ability to fill rush orders", "professional competence" and "quality consistency".

Based on customer response the indicators are reviewed and analyzed for follow-up meetings about improvement measures and implementation issues raised in customer feedback.


Goals and targets

Each of the factory's production lines passed 7 issues including "complaints response speed", " message feedback - correctness", " message feedback - promptness", "business attitude", "ability to fill rush orders", "professional competence" and "quality consistency". With a focus on active management, we expect to continuously improve customer service satisfaction, with overall satisfaction exceeding 80%.





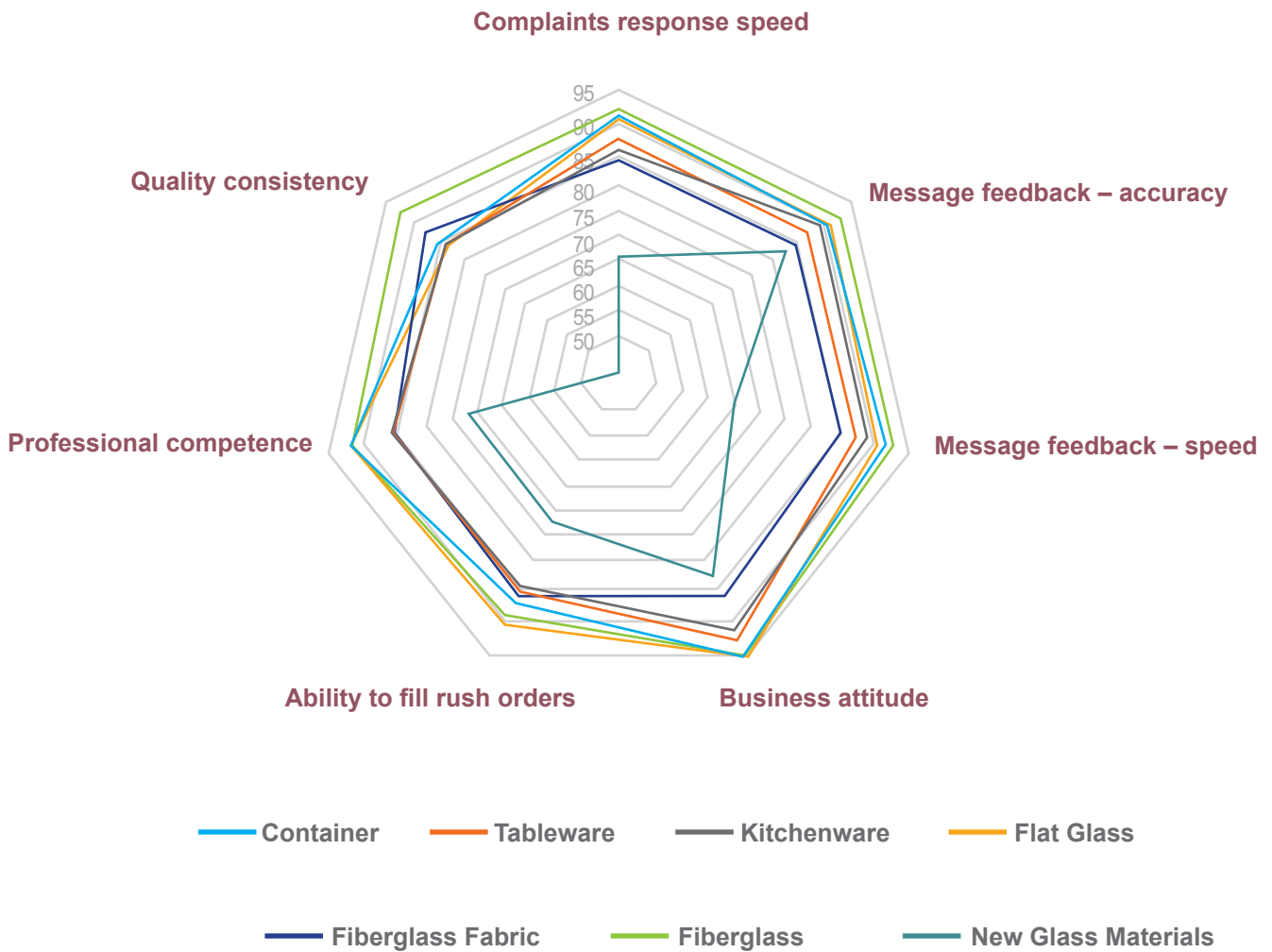
Objective evaluation

Average customer satisfaction in 2017: 80%

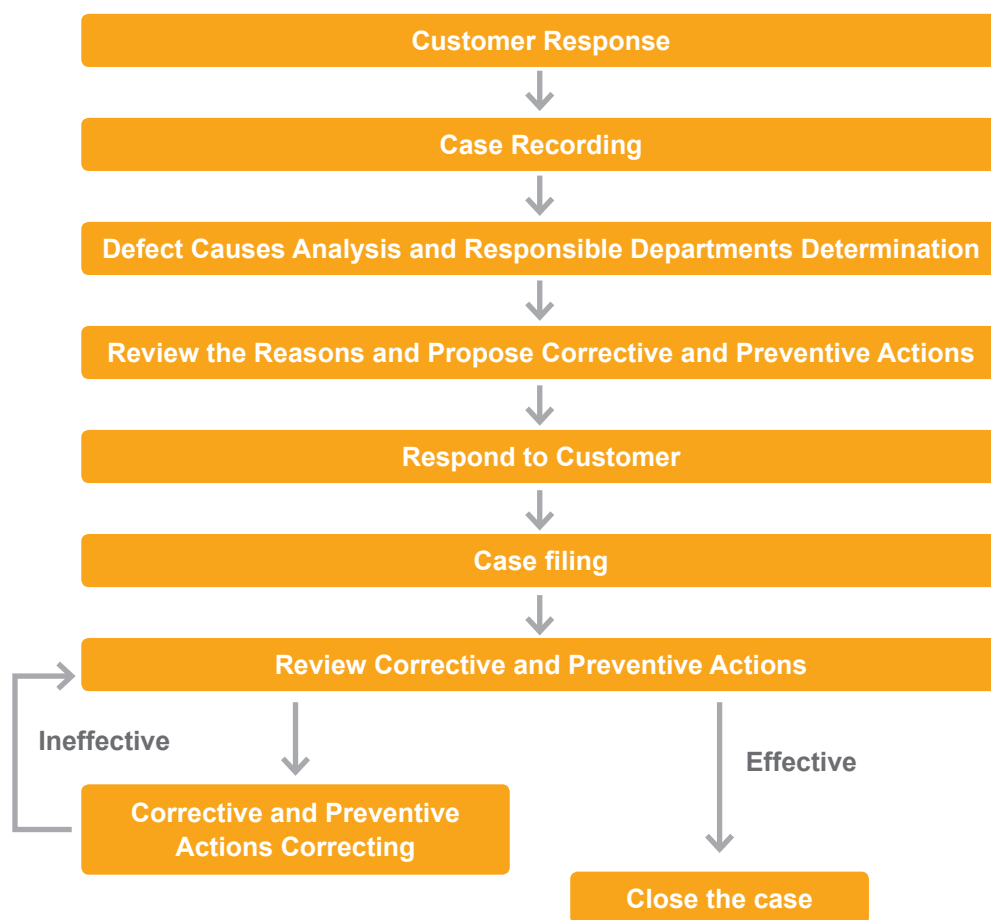
Customer Relationship Management

In 2017, customer satisfaction averaged more than 80% across various TGI departments (New Glass Materials Department is added to the survey scope in 2017). Each department will make improvements for the service failures and strengthen communication with customers, and expect to improve customer satisfaction in 2018.

Analysis of 2017 Customer Satisfaction



Customer Response Process



Protecting Confidential Customer Information

To practice personal data security management, TGI follows the relevant provisions of "personal data security maintenance management approach" and the "personal data protection act". We provide new staff education and training in personal profile protection to strengthen the awareness. Every six months staff from each department will be assigned to the education and training of personal profile protection. This is to reduce possible legal risks for the company and employees, protect the interests of customers and maintain the credibility of the company and enhance colleagues' handling capability of information security.



Information Security Training



Sustainable TGI



About TGI



Quality TGI



Green TGI



Friendly TGI



Appendix

In addition, we are also committed to protecting customers' confidential information. To prevent data leakage, our information equipment has strict permissions control, and all employees are required to protect customers' confidential and proprietary information carefully and prevent inappropriate loss of customer data. TGI provides information safety training for its staff regularly and urges the staff to lock their computers with passwords, in compliance with Item 3 of Article 11 of Regulations Governing the Certification and Management of the Authorized Economic Operators. In 2017, TGI did not receive any complaint regarding client privacy violation or loss of client data.

To establish face-to-face communications with our clients, each department also regularly visit customers, or participates in exhibitions: Flat Glass Business regularly attends Taiwan and Germany Building Materials Exhibition; Fiberglass Business participated in China Composites Expo, France JEC exhibition, Container & Tableware Glass Business took part in the Hong Kong Housewares exhibition and infant supplies exhibition in Shanghai.



Fiber Glass – JEC Exhibition



Fiber Glass – China Composites Expo



Container & tableware – Children Baby Maternity Industry Expo



Flat Glass – Building Materials Exhibition





3.5 Sustainable Supply Chain

Purchasing Policy

Purchasing Policy & Supply Chain Social Responsibility Management

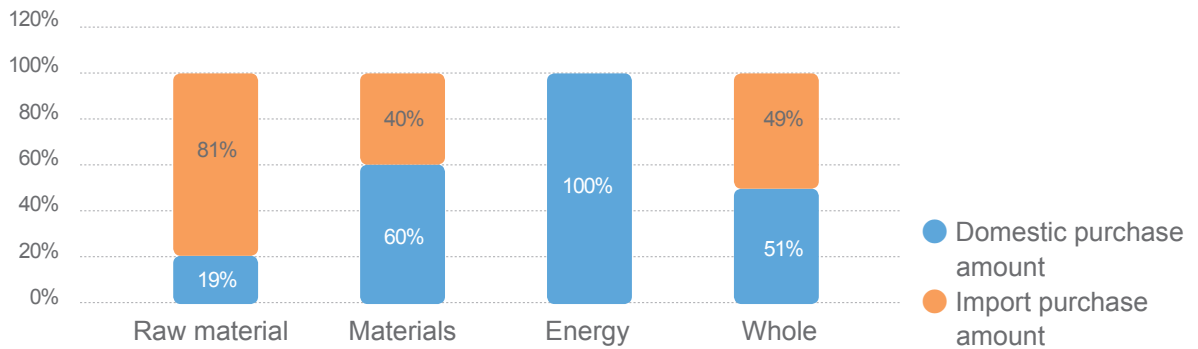
Since August 2017, an open procurement tender information has been published on the official website of TGI. Besides, TGI implements a fair, just and transparent procurement policy to supply our factories with materials with acceptable quality, reasonable prices, delivery punctuality, and such materials are also low polluting, do not contribute to public hazards and compromise the supply chain's safety. Every quarter TGI evaluates the prices, delivery punctuality, and quality of suppliers that might affect our product quality for the reference of future procurements.

As TGI is the supplier of glass processing products companies, it is also a part of its supply chain. Therefore, TGI evaluates and manages suppliers' environmental management, labor affairs, human rights assessment, social impact, and product liability impacts. The supplier is required to issue a statement prohibiting the employment of child labor, promising not to employ child labor and complying with its relevant regulations.

The supplier is one of the most important partners for the sustainable management of TGI. TGI is committed to enhancing the overall level of the supply chain in line with international standards. We hope to cooperate with suppliers to create a win-win situation and to enhance the sustainable development of society together.

In 2017, TGI worked with a total of 1,913 suppliers in Taiwan and 233 suppliers from overseas. TGI mainly works with local suppliers in Taiwan. Currently, the limestone and dolomite used in the factories come from Hualien. Other major materials (silica sand, sodium carbonate, and kaolinite) are imported since Taiwan does not have mines for such minerals. As the result, TGI imports 81% of the minerals and procures 19% of them locally. 60% of materials were procured locally and 40% was imported. With the exception of premium diesel (from Formosa Petro), TGI purchases fuel oil, natural gas and LPG from CPC Corporation. Electricity is 100% supplied by Taiwan Power Company. This can create job opportunities, boost regional economic developments, conserve energy consumption in transportations and enhance the suppliers' quality, green awareness and skills.

Raw Materials Procurement Ratio (%)



Suppliers / Sub-contractors Qualified Job Evaluation and Audit

Each quarter, Taiwan Glass uses 1-PO-B05-08 (supplier evaluation form) to evaluate the prices, punctualities, and qualities of suppliers that might affect our product quality. The result serves as a reference for future procurements.

For supplier evaluations, our procurement units evaluate the suppliers' prices; material units evaluate the suppliers' punctuality and the quality assurance units evaluate the suppliers' product quality. The evaluation results are recorded for reference for future procurements.

Our procurement staff uses the evaluation results above to calculate and produce run charts every quarter. They analyze and compare the data every 6 months and conduct in-depth analysis once a problematic trend is discovered in order to solve the problems or confirm the feasibility or effectiveness of our procurement system. TGI evaluates its suppliers each quarter to make sure that our suppliers meet our requirements and maintain a long-term and quality cooperation with quality suppliers. In 2017, there is no C-class manufacturer, which meets TGI's requirements. Manufacturers are required to provide high-quality material only and do so punctually.

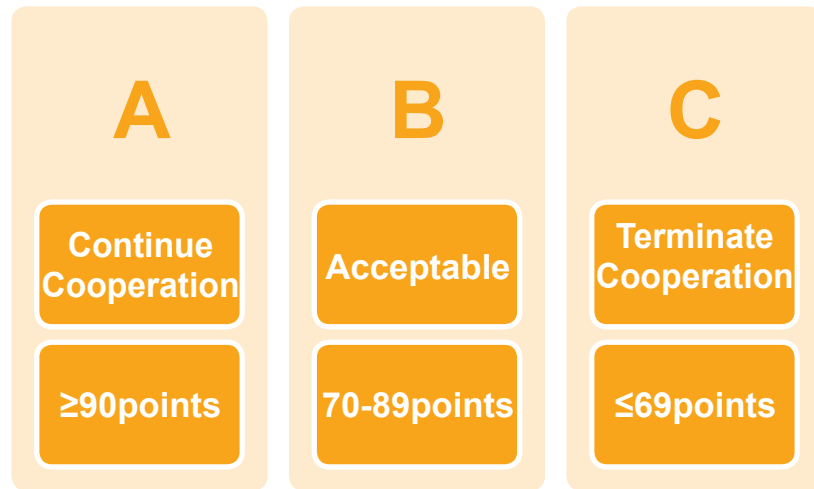


In 2017, the overall performance of suppliers was good, with about 97% of A-level and 3% of B-level.



2017 TGI Suppliers Assessment									
Number of Suppliers Evaluated Every Quarter					Supplier Assessment				
	1Q	2Q	3Q	4Q		1Q	2Q	3Q	4Q
Level A	145	138	135	138	Level A	98%	99%	96%	96.5%
Level B	3	2	6	5	Level B	2%	1%	4%	3.5%
Level C	0	0	0	0	Level C	0%	0%	0%	0%
Total	148	140	141	143					

We categorize our suppliers as Level A, B and C.



Evaluation Details

1.Evaluation Schedule:

- Annual evaluations are conducted at the end of every December and are completed by the 20th of the following month.
- Quarterly evaluations are conducted every March, June, September and December and completed before the 15th of the following months.

Quality assurance units (and the units that actually use the materials) are responsible for evaluating quality items; units that submit purchase requisitions or the material units are responsible for evaluating the delivery; procurement units are responsible for evaluating prices and calculating the total numbers in the surveys.

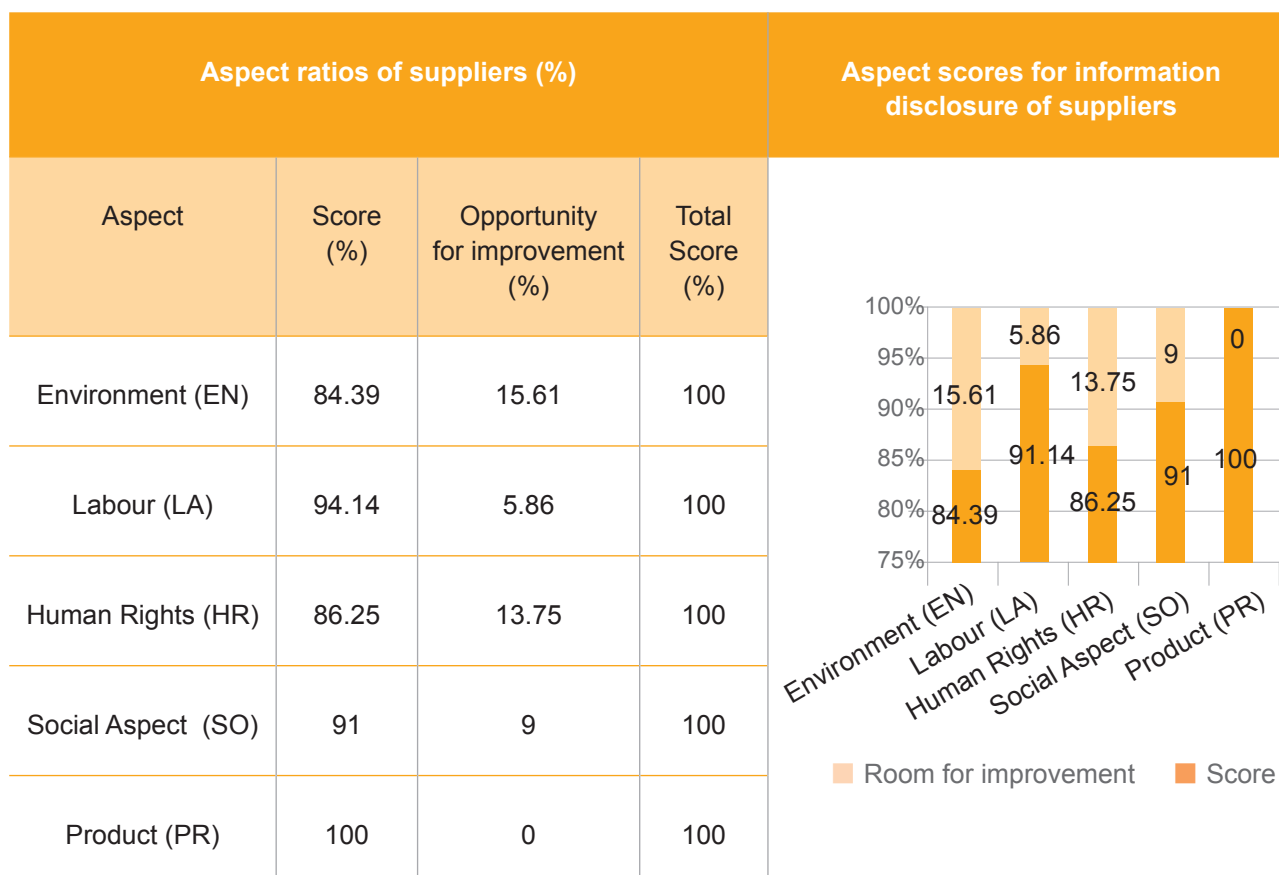
Supply Chain CSR Management

In addition to the management of existing suppliers, TGI also extends the concept of sustainable development to the supply chain. We introduced the “Supply Chain CSR Management Evaluation” in 2015, assessing the environmental impact, labor conditions, human rights, social impact and product liabilities of part of the new suppliers and current suppliers. The evaluation aims to encourage our suppliers to improve their methods and fulfill their corporate social responsibility voluntarily.

CSR Evaluation Analysis

TGI evaluated the suppliers' corporate social responsibility, analyzed the overall scores from all aspects, and implemented questionnaires in the form of information disclosure as a basis for the evaluation of our suppliers' CSR results. Questionnaires were collected from 20 suppliers. The results indicated 25% of the suppliers as excellent, qualified suppliers were about 75% and 0% of the suppliers needed to improve.

From the results, the control of the environment and human rights-oriented should be stressed further. In the future, TGI will review the score and analysis methods and continue tracking the progress of improvement. The analysis results are as follows:





Score analysis for the 20 suppliers Analysis				Analysis of supplier evaluation result
Classification	Score	Number of suppliers	Percentage	<p> ■ Gold (good)105~85 ■ Silver (qualified)84~60 ■ Bronze (to be improved)<60 </p>
Gold (good)	105~85	5	25.00%	
Silver (qualified)	84~60	15	75.00%	
Bronze (to be improved)	<60	0	0%	
total		20	100%	

Environmental Sub-contractor Qualifications and Evaluations

Every year TGI uses 1-PO-B05-12 (environmental subcontractor evaluation form) to evaluate these subcontractors. During the evaluation cycles, if a subcontractor commits a severe violation of any environmental, labor safety and health regulations, it will be reported to the chairman or president and the said contractor will be disqualified as a TGI contractor. Based on TGI’ s requirements, subcontractors should have necessary licenses/certifications or receive training in order to have smooth cooperation with TGI.

During the initial contract signing, the factory affairs representatives from all factories will head to the environmental subcontractors’ facilities to understand how they operate and their working environments. The representatives will verify their licenses and ensure that the waste collecting and disposal process is intact and sign the 3-way contract afterward.

環保協力廠評鑑表

代辦廠 _____ 總經理 _____ 協理副理 _____ 協理副理 _____ 專職長 _____ 經理 _____

協力廠名稱			
年 度	供應項目		
廠 址	採購：		
經 理	開發：		
代 理	相關單位：		
備 註			
備 註			

1-PO-B05-12

Environmental sub – contractor evaluation form

Chapter

4

Green TGI

- 4.1 Sustainable Environment Strategy
- 4.2 Sustainable Resource Management
- 4.3 Green Innovation



TGI is aware of the importance of environmental protection and the sustainable development. We encourage the implementation of energy and water saving strategy across TGI factories every year. Also, in order to reach the environmental symbiotic and the sustainability principle, we manage the sustainable resource through good management modes.



Achievements of Green Production in 2017

400 million

In 2017 invested a total of 400 million in the plan to promote environmental policy.

180,000 tons

Recycled 180,000 tons of scrap glass in 2017.

61%

Taoyuan Factory recycled 61% of its waste in 2017.

12.2%

The product water consumption intensity of glass container dropped by 12.2% compared to 2016.

55%

Environmental equipment, pollution-handling expense, environmental management system and training expenses increased by 55% compared to 2016.

-59,481 GJ

Heavy crude oil consumption was 1,480 kiloliters lower than 2016 and the heating value dropped by 59,481GJ.

ISO 50001

The Taoyuan and Hsinchu Factory, for better energy management, implemented the ISO 50001 energy management system to maximize its energy efficiency through systematic examinations.

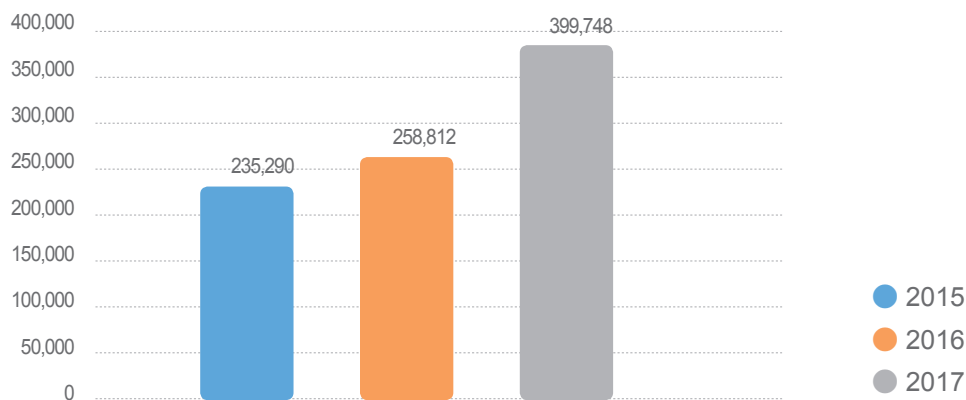
5.35%

Hsinchu Factory increased its water recycle rate by 5.35% compared to 2016.

4.1 Sustainable Environment Strategy





TGI continued its investment in equipment related to environmental protection, pollution treatment, environmental management systems and environmental education related personnel training, to achieve compliance with environmental legislation, lower environmental pollution, and achieve sustainable environmental management. In 2017, TGI invested a total of NT\$400 million in environmental protection, 54.5% higher compared to 2016, a testament to TGI's commitment to environmental protection.

Environmental Expenditure(Unit: 1,000 NTD)



Climate Change Policy

TGI tries to understand the environmental ethics and has a sense of responsibility for climate change. It adopts policies of positive development and actively participates in carbon reduction programs as a response to climate change. TGI's Factories (Taoyuan, Hsinchu, Taichung, Lukang, Lukang Flat Glass, and Changpin Factories) are located in industrial zones and conform to the environmental impact assessment for industrial areas instead of being located in any ecological conservation zones or protected habitats. In terms of biodiversity, the company's activities, products, and services have no significant impact on conservation areas or other areas important to biodiversity. Since the factories opened there have never been any petitions about their effect on the ecology.

	Response to water shortage	All factories have implemented water conservation projects.
	Recycle crushed glass	The use of crushed glass theory for the heat of fusion only requires about 50% of raw materials, which can effectively save energy and reduce the GHG emissions.
	Energy-saving products	We continue to develop and manufacture Low-E glass and vacuum insulated glass.
	Green procurement	Taiwan Glass conducts priority procurement of energy-saving products.



Energy conservation and carbon reduction

- TGI constantly takes inventory of greenhouse gas emissions at all factories to understand the actual situation and take measures to reduce emission accordingly. By continuing reducing our energy consumption in manufacturing, we are able to lower our energy consumption intensity.
- The Taichung Factory is a legal person with a contract capacity of more than 800 kilowatts. Based on Article 9 of Energy Administration Act, the factory should have an annual energy conservation rate of more than 1%. The Taichung, Taoyuan and Hsinchu factory has introduced the energy management system to work towards this goal.



Sustainable TGI



About TGI



Quality TGI



Green TGI

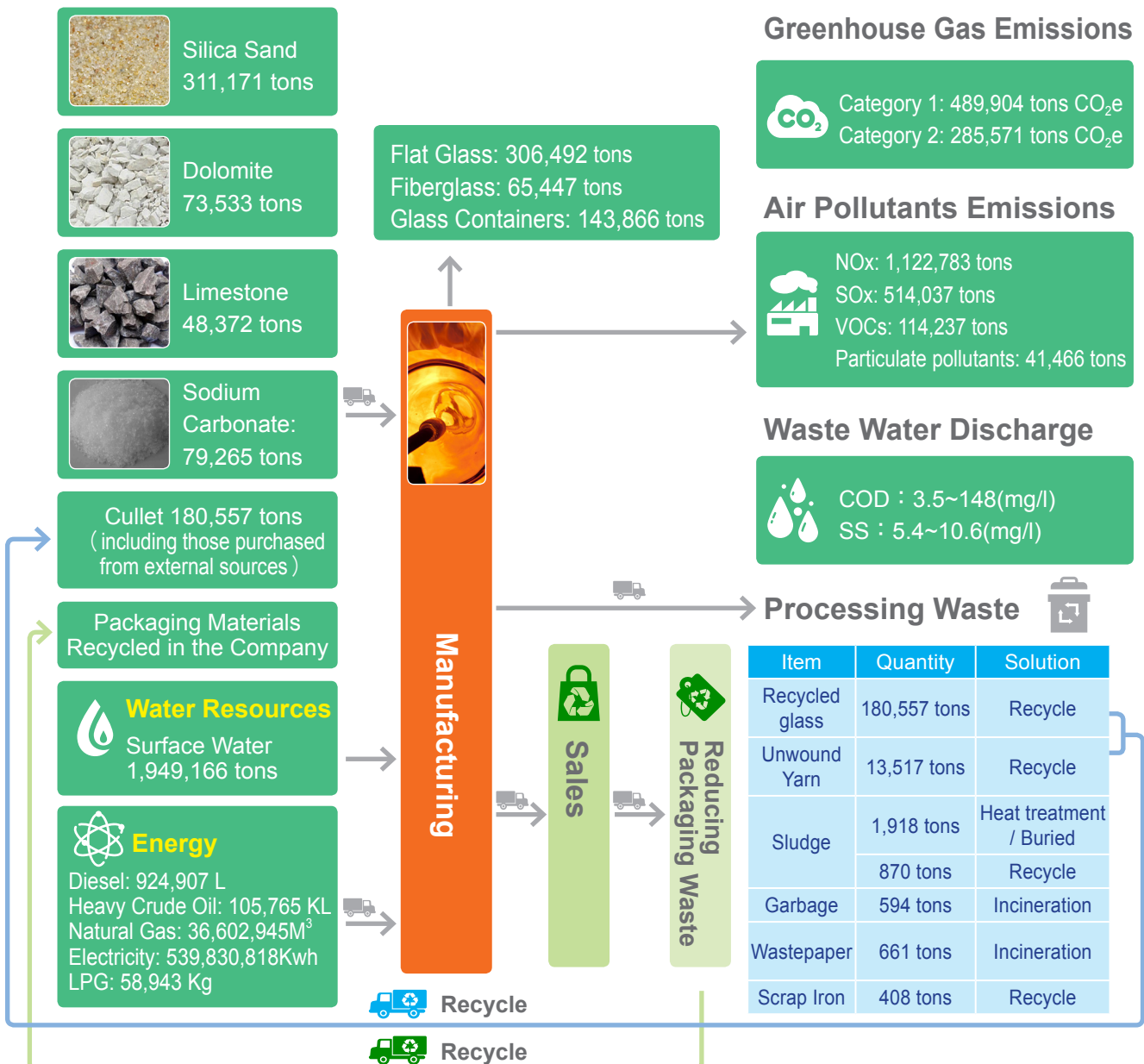


Friendly TGI



Appendix

2017 Environmental Input and Output Diagram of TGI



Energy Management System Introduced

Taichung Factory introduced ISO 50001:2011 (energy management system) since 2014 and it is planned to introduce to other factories. To lower the energy consumption, conserve energy and reduce carbon emissions, we keep modifying the energy management and looking for any improvement measures. Taoyuan and Hsinchu factory has introduced the energy management system and obtained ISO 50001 in 2017.

Compliance with Environmental Regulations

TGI believes in honesty and hard work and always complies with governmental regulations. Under the “environmental protection and occupational safety first” principle, TG pursues the objective of “zero pollution and occupational hazards” by complying with the government’s environmental protection policies while ensuring occupational safety to fully fulfill the company’s corporate social responsibilities. There are no major leak incidents or complaints about environmental impacts occurred to TGI factories. All violations had been remedied and the compliances with environmental regulations are as the following:

Factory	Violations	Fine (NTD)
Taoyuan	Fined for illegal levels of boron in industrial wastewater	720,000
	Violation of Article 36 of Waste Disposal Act.	6,000
Hsinchu	Violation of Article 18 in Water Pollution Control Act.	27,000
Lukang	Violation of Article 31.1. (1) of Waste Disposal Act.	6,000

Taoyuan Factory Violation Details

Violation	Improvement Measure
The Environmental Protection Bureau of Taoyuan examined the wastewater discharge of the Taoyuan Factory and found an illegal level of boron in the discharge. The factory received an NT\$330,000 and NT\$390,000 fine.	The production estimated and improvement was time-consuming but the manufacturing process is switched to a boron-free fiberglass manufacturing process.
The storage locations, containers, and facilities of waste plastic (R-0401) were not marked in Chinese in a prominent place with the name of the waste. The factory received an NT\$6,000 fine.	The waste plastic is relabelled according to the waste types approved in the industrial waste disposal plan.

Hsinchu Factory Violation Details

Violation	Improvement Measure
Due to wastewater treatment equipment malfunction, the overload is fined of NT\$27,000 contributing to a violation of Article 18 of Water Pollution Control Act.	The overflow holes and liquid level control alarms are installed in wastewater treatment equipment tank.

Lukang Factory Violation Details

Violation	Improvement Measure
Lukang Factory was checked for the waste storage location of classification code D-0499 by the Environmental Protection Bureau of Changhua. There were piled degraded products not obviously separated and not consistent with the factory layout approved in industrial waste disposal plan causing an NT\$6,000 fine.	The degraded products and the D-0499 waste are stored separately. The D-0499 storage location is separated using winding for a warning.



4.2 Sustainable Resource Management

Sustainable Energy Resource Saving Management Policy



Importance

Global resources production is declining. On the demand side, it has grown year by year. By increasing the efficiency of the energy resources using, TGI has actively reduced the percentage of energy costs, reduced greenhouse gas emissions, and promoted energy-saving green production to achieve sustainable and environmental friendly goals.



Policy and Commitment

We continue to promote energy-saving and carbon reduction actions and strive to improve the efficiency of energy using in glass production. Through energy-saving measures, TGI reduced the impact of operating costs on the environment.



Action Method

- The Taoyuan Factory promoted energy-saving and carbon reduction projects such as using kiln oxyfuel specific measures, gas recovery and reuse, using VFD for exhaust gas turbine control, pallet recycling and other improvement projects.
- The Hsinchu Factory renewed its equipment such as combustion-supporting fans, kiln cooling fans, waste gas treatment fans, air compressors and lighting equipment.
- The Taichung Factory used recycled wastewater from production instead of tap water and power-saving projects such as supporting power lines.
- The Changpin Factory has installed a water recycle equipment to reduce the water discharge for production.





Goals and targets

- The Taoyuan Factory reduced CO₂ emissions by 2,176 tons.
- The Hsinchu Factory reduced electricity consumption by 1.0% and gas consumption by 3.0% in 2017.
- As a legal person and natural person of a contract capacity of more than 800 kilowatts, Taichung Factory has, according to the Article 9 of Energy Administration Act, established the objectives of conserving 1% of electricity.
- The Changbin Factory conserved 700 tons of water per month.



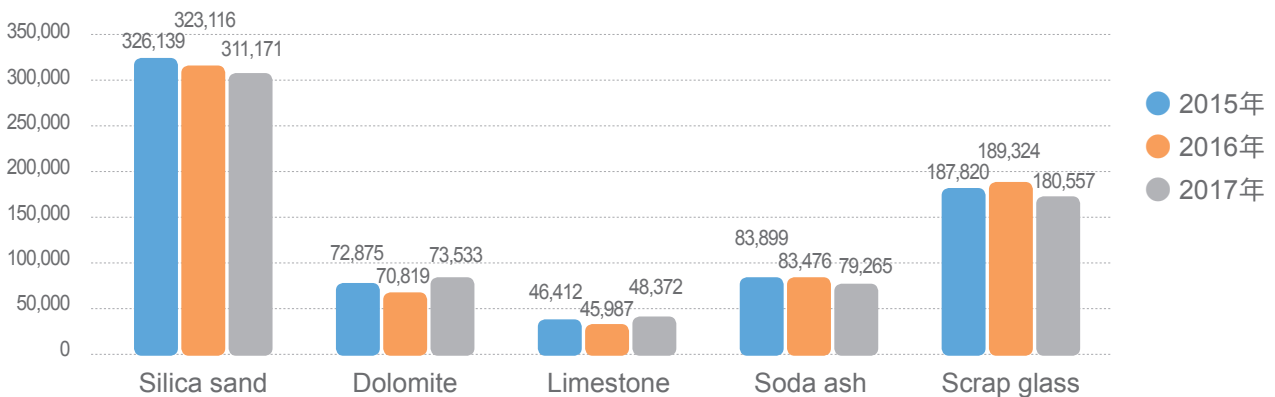
Objective evaluation

- The Taoyuan Factory reduced 2,326 tons of CO₂ emissions, achieving success rate of 107%.
- The Hsinchu Factory reduced its electricity consumption by 1.2% and its gas consumption by 4.2%.
- The Taichung Factory energy-saving rate was 3.04% in 2017.
- The Changpin Factory saved about 6,300 tons of tap water from April to December 2017.

Raw Material Management

TGI's main products include flat glass, fiberglass, and glassware. The major materials used in production include silica sand, limestone, dolomite, soda ash and recycled scrap glass (cullet). In 2017, TGI used approximately 311,000 tons of silica sand, more than any other material. The consumption of these materials is listed below:

Material Consumption (Ton)



※Note: Other material including kaolin, colemanite, and nepheline was only used in an insignificant amount and therefore was not listed above.

Recycle of Scrap Glass

A glass is highly recyclable. Thanks to this feature, in the future government and the society certainly will support the use of glass as packing material due to environmental concerns. TGI's flat glass factories use recycled scrap glass in production. In addition to recycling scrap glass, TGI also recycles all the reusable packaging material in the production process. Not only does this reduce cost, it also reduces our environmental impact and fulfills our corporate social responsibilities.

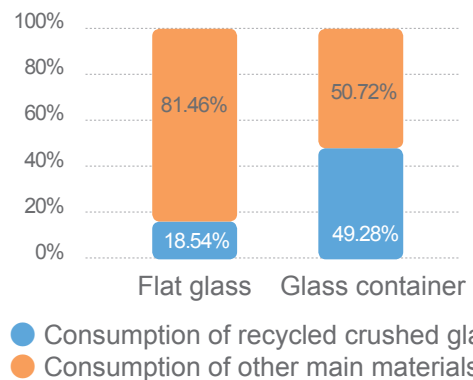
TGI's container factory recycles its blemished and scraped products, which reduces the consumption of ore and the environmental impact. Recycle yards recycle scraped glass products and ship them to the Hsinchu Factory. These recycled products will be selected, washed, smashed and screened before being used as raw materials for production. Recycling reduces waste and consumption of ore, which benefits the environment. A scraped glass is not considered as waste in the glass industry. Instead, it is the material needed for production. Glass containers are the type of product most consumers are familiar with and the most demanded product in the glass industry. Therefore adding scraped glass into the molten glass is both beneficial environmentally and economically.

Scraped Glass Consumption Ratio

Unit : %

Year/Product	Flat glass	Glass container
2015	19.24%	50.99%
2016	19.10%	50.47%
2017	18.54%	49.28%

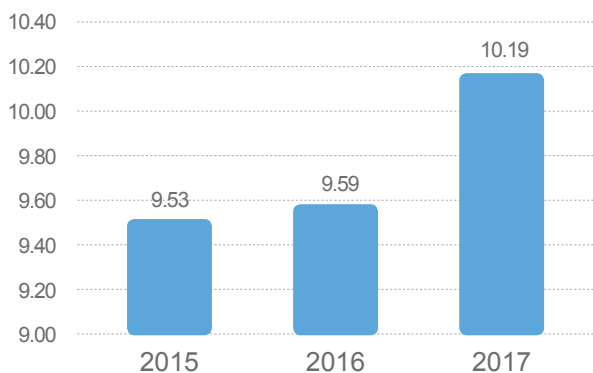
2017 Scraped Glass Consumption Ratio(%)



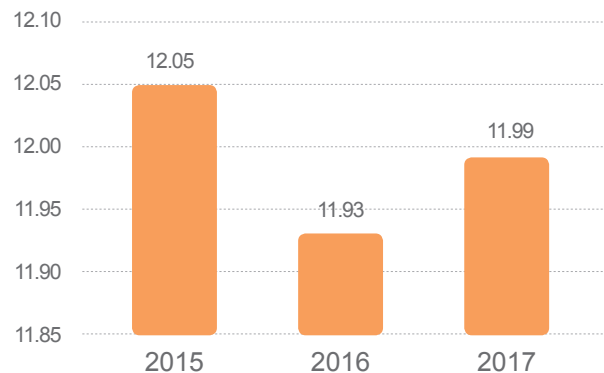
Energy Management

Each TGI's factory improves its energy efficiency in the production of glass, through a furnace heat storage exchange chamber and the best available control technology, with energy-saving kiln oxyfuel specific measures to reduce the operating costs in terms of environmental impact. Various types of energy consumptions are as follows:

Flat glass energy consumption intensity(GJ/Ton)



Glass container energy consumption intensity(GJ/Ton)



Various energy consumptions (by year)						
Year/ Energy		Heavy crude oil (KL)	Diesel(Liter)	Natural gas (M ³)	Liquefied petroleum gas (KG)	Electricity
2015	Total	106,241	781,393	30,736,076	24,577	499,263,887
	Calorific value (GJ)	4,269,371	27,476	1,029,290	1,241	1,797,330
2016	Total	107,245	725,273	31,556,070	53,539	503,850,691
	Calorific value (GJ)	4,309,710	25,520	1,056,750	2,704	1,813,842
2017	Total	105,765	924,907	36,602,945	58,943	539,830,818
	Calorific value (GJ)	4,250,229	32,522	1,225,759	2,977	1,943,369

Greenhouse Gas Inventory



Greenhouse Gas Assessment Policy

Every member of TGI is contributing to energy conservation, carbon reduction, and greenhouse gas emission reduction. We also promote the awareness of green production and trace the carbon emission amounts regularly.

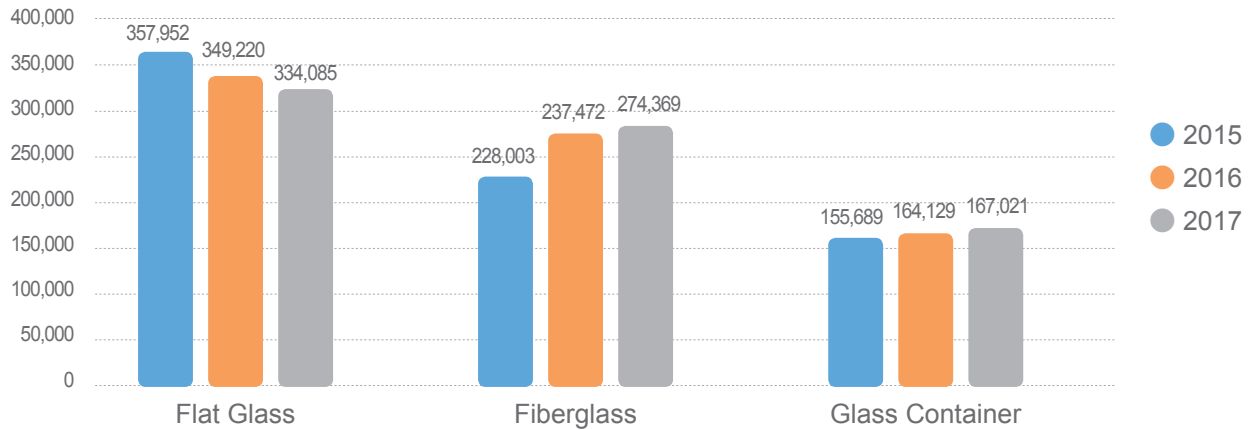
TGI' greenhouse gas emissions can be divided into two categories: direct and indirect. The direct category includes the energy (such as heavy crude oil, diesel, and natural gas) used during production. The indirect category mainly consists of the electricity purchased from external sources. TGI' s direct carbon emission was approximately 490 thousand tons of CO₂e, 1.01% higher than 2016. (Please note that this report does not include the 3rd category or fugitive emission sources and only lists major emission sources.)

Product Carbon Emissions (by year)

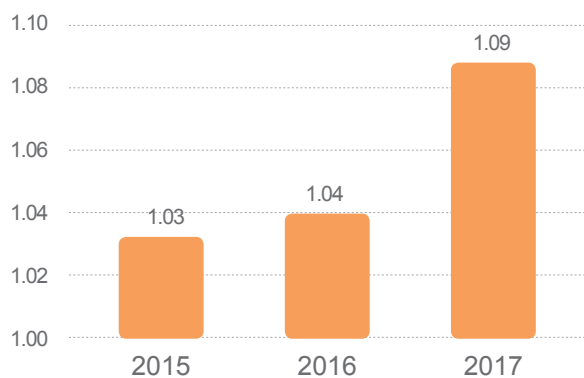
Unit: Ton CO₂e

Product/ Year	2015		2016		2017	
	Direct emission	Indirect emission	Direct emission	Indirect emission	Direct emission	Indirect emission
Flat Glass	274,791	83,161	270,231	78,989	258,466	75,619
Fiberglass	100,100	127,903	103,279	134,193	116,730	157,639
Glass Container	106,637	49,052	111,278	52,851	114,708	52,313
Subtotal	481,528	260,116	484,788	266,033	489,904	285,571
Total	741,644		750,821		775,475	

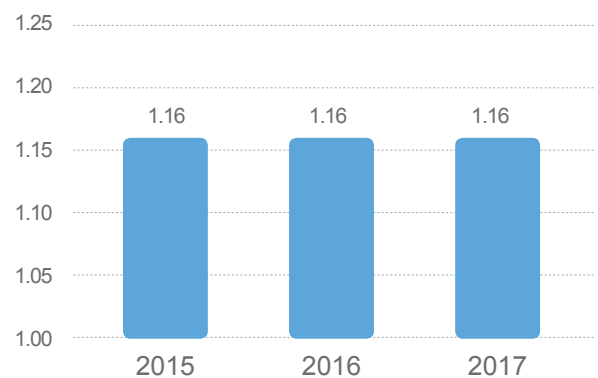
Product Carbon Emissions (by year) Unit: Tons CO₂e



Flat Glass GHG Emission Intensity (ton of CO₂e/ glass (ton))



Glass Container GHG Emission Intensity (ton of CO₂e/ glass (ton))



Note: 1. The emission has not been verified by a third party organization.
2. This report does not include the 3rd category or fugitive emission sources and only lists major emission sources.

Energy Conservation and Carbon Reduction Commitment from TGI Factories

In 2017 TGI continued to promote energy conservation and take action on carbon reduction. Based on strengthening CSR and the goal of sustainable development of green production, our Taichung Factory introduced ISO 50001:2011 (energy management system) and was certified in 2014. Taoyuan Factory and Hsinchu Factory also passed ISO 50001:2011 certification in 2017.

By establishing energy management principles and methods, it will allow TGI to optimize its energy efficiency while staying in line with the company's strategies and objectives. On top of this, the Plan Do-Check-Action mechanism can continue improving the way TGI uses energy. By lowering energy cost and reducing greenhouse gas emissions, TGI will achieve sustainability and be more environment-friendly. The experience from these factories will be replicated at other factories.



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Energy Conservation and Carbon Reduction Commitment from TGI Factories



Taoyuan Factory

To achieve reduction of indirect energy consumption through the (ISO 14001, ISO 50001) environmental management system management program. Every year it implements energy-saving measures, mainly including lighting energy consumption reduction, production process improvement, and equipment depreciation or compressor performance adjustment. Execute energy management in the plant and voluntarily comply with the government's greenhouse gas reduction policy.



Hsinchu Factory

TGI joined in MOEA's Voluntary GHG Reduction Program in 2012. We continue promoting energy conservation and carbon reduction, encourage all employees to participate in energy conservation activities, and pool employee awareness of energy conservation. Each year, we report the implementation plan for energy-saving measures and accelerates the updating of efficient energy-saving equipment to the "Bureau of Energy, Ministry of Economic Affairs". We also commission SGS to verify the ISO 14064 greenhouse gas audit statement on an annual basis. We passed the ISO 50001 certification in November 2017. Through the check of the energy management system, it comprehensively inspects energy use, regularly monitors the effectiveness of energy-consuming equipment and continuously improves energy performance.



Taichung Factory

As a legal person and natural person of a contract capacity of more than 800 kilowatts, the factory has, according to the Article 9 of Energy Administration Act, established the objectives of conserving 1% of electricity. As the use of the furnace increases, the energy consumption will increase year by year. The harder it is to achieve the goal, the units of Taichung Factory will continue implementing energy-saving plans in all aspects. In 2017, the Taichung Factory conserved electricity by 32,942 kilowatts and reduced carbon dioxide emissions by 17.43 tons.



Lukang Factory and Lukang Flat Glass Factory




From 2011, Lukang Factory and Lukang Flat Glass Factory joined the Industrial Development Bureau's Greenhouse Gas Emission Voluntary Reduction Program. Each year, through the environmental management system, the factory proposes its energy conservation plan to become more friendly to the environment, fulfill its corporate social responsibilities and achieve sustainable development.



Changpin Factory

With growing problems of climate anomalies, coupled with limited conventional energy reserves, major countries of the world all implement carbon reduction strategies. The Changpin Factory is aware of the importance and urgency of climate change so it actively improved equipment and adjusted production modes, for the development of a green energy industry, and to help create a sustainable low-carbon society and develop a low-carbon economy.

TGI reduced its carbon emission by a total of 6,882 tons in 2017. The energy conservation and carbon reduction measures and results for all TGI' s factories are listed below:

Item Factory	Energy conservation measures	Energy conserved	Amount conserved	CO ₂ reduced (ton)	CO ₂ reduced (ton)
Taoyuan Factory	TT-7 changed to oxyfuel combustion	Heavy oil (KL)	747	2,324	
	Improved CFR2 steam consumption	Heavy oil (KL)	0.581	1.96	
Hsinchu Factory	Replaced 4 old TS-8 IS Mold Cooling Fans with IE3 inverter motors and inverter controls	Electricity (KWH)	226,358	119.7	
	Replaced 2 TS-8 300HP spiral compressors with inverter motors	Electricity (KWH)	385,440	203.9	
	Replaced 2 60HP TS-8 TANK FAN with 75HP and IE3 motor	Electricity (KWH)	371,649	196.6	
	Replaced TS-8 EP ID FAN175HP with IE3 inverter motor and VFD	Electricity (KWH)	581,664	307.7	
	Updated TS-8 #1~#4LineLEHR	Electricity (KWH)	352,369	186.4	
Natural gas (M ³)		360,792	678.51		



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Item Factory	Energy conservation measures	Energy conserved	Amount conserved	CO ₂ reduced (ton)	CO ₂ reduced (ton)
Taichung Factory	TF1 wastewater treatment aeration machine operation time adjustment	Electricity (KWH)	4,745	2,510	
	Replaced indoor fire alarm light with LED	Electricity (KWH)	1,482	0.78	
	Turn-off buffering time reduction plan for the dehumidifiers in the lamination cleanroom	Electricity (KWH)	1,320	0.70	
	Discontinue the use of TF-1 W/ H VFD to reduce the unloaded iron losses, and use the supporting power lines to supply the original load from S/B	Electricity (KWH)	45,806	24.23	
Lukang Factory	Not heating SFR seam sewing machine (hot-melt adhesive is replaced by twin adhesive)	Electricity (KWH)	57,481	30.3	
	Improved the power supply and output circuit of the weaving machine's yarn breakage device and reduce the electricity consumption	Electricity (KWH)	56,074	29.6	
Changpin Factory	Replaced the air conditioners in the 2nd laminated glass assembly room with energy-saving products 1	Electricity (KWH)	407,778	215.3	



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Item Factory	Energy conservation measures	Energy conserved	Amount conserved	CO ₂ reduced (ton)	CO ₂ reduced (ton)
	Shut down the coating removers of coating line during the employee break time	Electricity (KWH)	20,573	10.9	
	Cleaning and maintenance the air conditioning heater in the 1st laminated glass assembly line	Electricity (KWH)	79,200	41.8	
Total of CO ₂ reduction across all factories (tons)				6,882.38	

Note: 1. For the inter-annual plan, the electricity consumption of 6 months is recognized in 2017.

Water Resources Reduction Management



Water Resources Management Policy

TGI improves water efficiency and conducts priority procurement of water-conserving equipment. We promote awareness of green production and reuse the water resources.

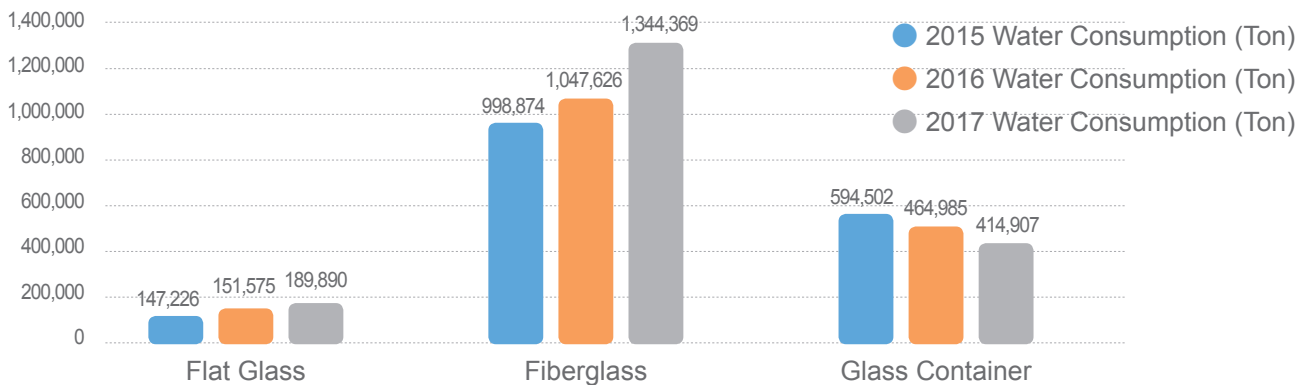
In the manufacturing process for processed glass, glass edging, anvil, and drilling all require water. TGI, after assessments, upheld the principle of water resources recycling, continued assessment, and applications of water-saving techniques to reduce water consumption.

The entire factory's water consumption includes water for industrial use, water for daily use and recycled water (used in part for the waste gas emission system). The factories use recycled water instead of tap water, reducing the water consumption. The way in which TGI obtains water for each factory does not have a significant impact on the local water supply. Water is obtained from Taiwan Water Company, Area 11, Liyutan Reservoir, etc., with water supplies of less than 5%.

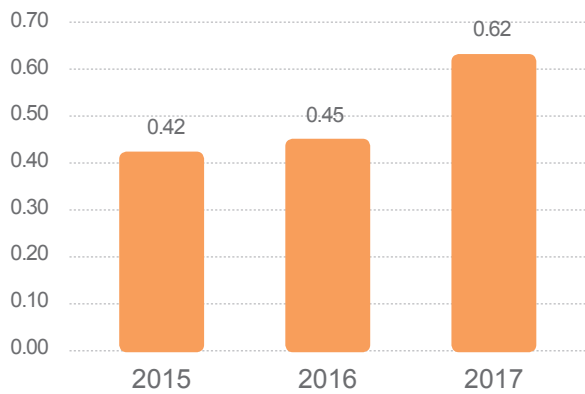
TGI factories consumed approximately 1.95 million tons of water in 2017. Due to some production improvements, the recycled water is used for dilution. The water consumption intensity of flat glass was increased by 37.78% and 29.75% for fiberglass. However, the water consumption intensity for glass containers dropped by 12.20%.

Factory	Water Source
Taoyuan	Taiwan Water Corporation 2nd Branch
Hsinchu	Dongxing waterworks
Taichung	Water Management Area 4, 1st Branch
Lukang/ Lukang Flat Glass	Taiwan Water Corporation 11th Branch
Changpin	

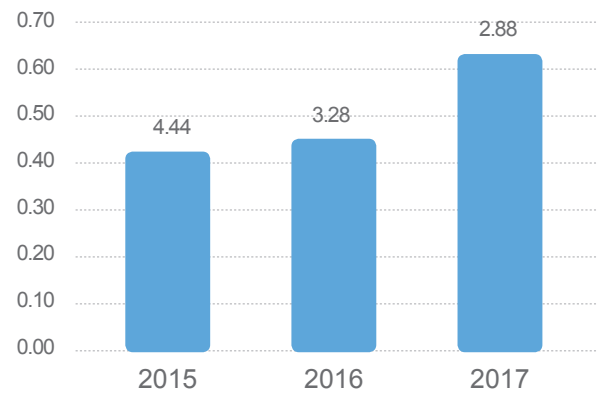
Product Water Consumptions (by year)



Flat Glass Water Consumption Intensity (ton of water/ glass)



Glass Container Water Consumption Intensity (ton of water/ glass)



Factory Water Recycling and Conservation Measures

In order to cope with the extreme climate change and water shortage risks, TGI factories continued promoting water conservation in 2017. In addition to improving facilities and equipment, TGI also conducted outreach to staff on water use for behavioral changes to improve the efficiency of water conservation. The Hsinchu Factory had a higher water recycle rate in 2017 than 2016 because the factory introduced filtered pure water with high conductivity to the cooling circulating pool and increased the conductivity standard of the cooling pool. This means the wastewater will not go to the wastewater pool and as the result, the amount of wastewater had decreased while more water had been recycled, which contributed to a higher recycling rate.

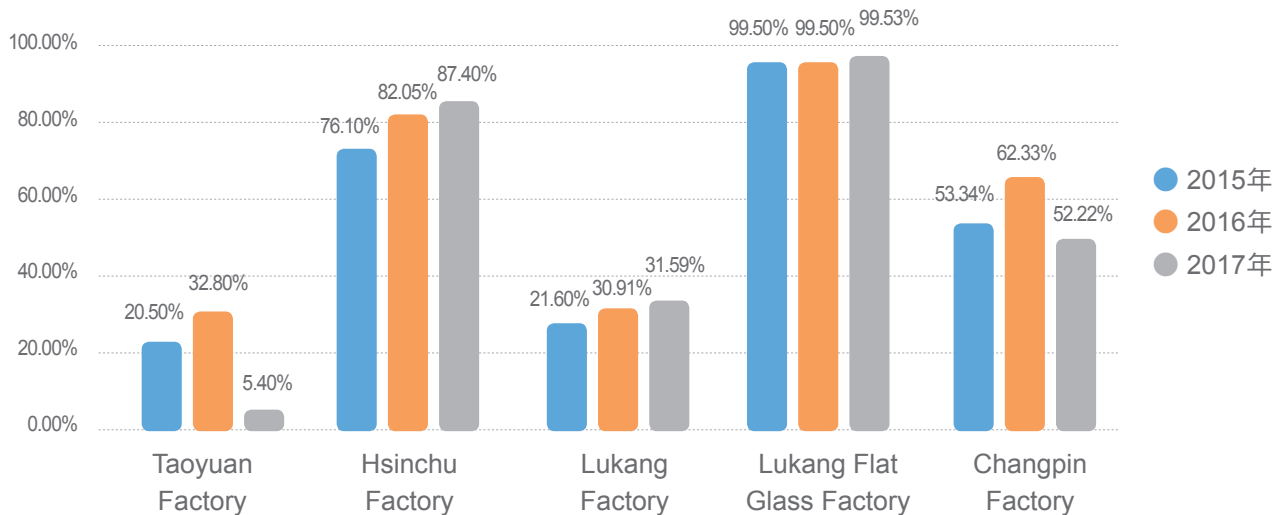
The following table shows each TGI factory's amount of water recycled and recycling rate in 2017:

TGI 2017 Factory Recovery and Recycling of Water Resources

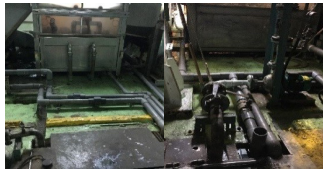
Project / Factory	Taoyuan	Hsinchu	Lukang	Lukang Flat Glass	Changpin
Recycled Amount (M ³)	35,354	402,200	321,360	12,174,318	36,118
Recycle Rate (%)	5.40%	87.40%	31.59%	99.53%	52.22%

- Notes :
1. Processing capacity: the amount of wastewater flowing to the recycling system.
 2. Recycled Amount: the amount of water used after processed in the recycling system.
 3. Recycle Rate : (Recycled amount ÷ processing capacity) × 100%.
 4. The Taichung Factory does not have a flow meter and therefore unable to provide related numbers.

Water Recycle Rate Comparison Across Facilities



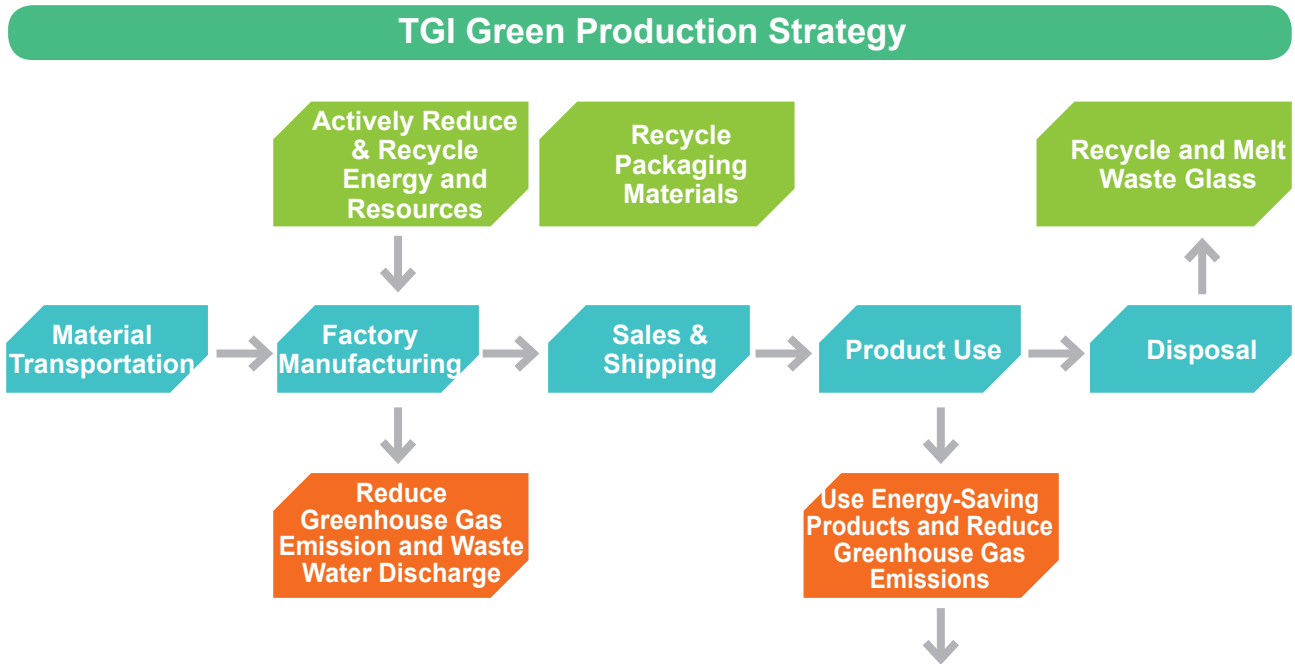
Water Conservation Measures (by factory)

Factory	Water Conservation Measures	Estimated conserved quantity	Photos
Taoyuan	Place the high-pressure tank's pipe into the wastewater recycle pool	238 tons/year	



Factory	Water Conservation Measures	Estimated conserved quantity	Photos
Hsinchu	Install backwash water recycle equipment to reduce discharge from the TS-6 water plant	17,000 tons/year	
	Installed water recycle equipment to TS-9 Mold Cooling Water	8,000 tons/year	
Taichung	The wastewater from production is chemically mixed and then treated by the UF system to replace the use of tap water for achieving water recycling in the processing plant	7,764 tons/year	
Lukang & Lukang Flat Glas	Recycles water and RO concentrate	198,985 tons/year	
Changpin	After wastewater treatment, the recyclable water is imported to the original pool. The water is reused for the product production after filtered and softened	700~1,300 ton/year	
	Installed water recycling devices for bilateral glass edging machine at glass edging unit to reduce the production wastewater discharge and to prevent the water conductivity getting too high to be recycled		

4.3 Green Innovation



Facing the trend of environmental protection and green production, TGI is committed to improving its raw material efficiency and reducing the environmental cost during production. Energy and resource consumption numbers can help TGI evaluate the greenhouse gas emission intensity, air pollution, wastewater and waste from the production to help the company work towards waste reducing and environmental impacts.

Air Pollution Control

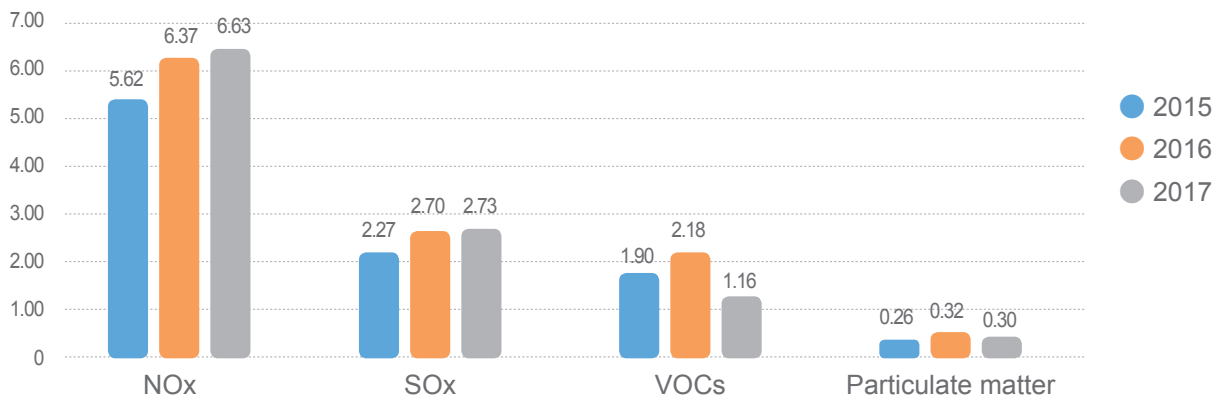
For air pollution prevention, TGI starts with reducing the pollutants in the exhaust. Our priority is to comply with EPA' emissions standards and reduce pollutants emitted every year. TGI follows the ISO 14001 management system and complies with air pollution prevention guidelines. We have departments in charge of periodically checking and maintaining our equipment. Should there be any control or emissions anomalies, these departments will respond by carrying out contingency plans. They will determine the cause of the anomalies and have them under control immediately to reduce the burden our manufacturing imposes on the environment.

NOx, SOx, VOCs and particulate matter pollution in all TGI factories were all reduced in 2017 in comparison with 2016. To effectively manage air pollutant emission and in response to air pollution regulations that will only get stricter, all TGI factories are working hard to introduce the new exhaust treatment system. Due to the original exhaust treatment system used for many years, the Taichung Factory and Lukang Flat Glass Factory decided to build the new and effective desulfurization, denitrification and dust removal system in 2017.



Total Air Pollutants Emissions for Each TGI Factory				Units: ton
Air pollution evaluation item	Year	2015	2016	2017
NOx		1,032,223	1,162,249	1,122,783
SOx		449,483	515,915	514,037
VOCs		175,223	185,586	114,237
Particulate matter		36,081	41,712	41,466

TGI Air Pollutant Emission Intensity Record (KG/ tons of glass)



Water Pollution Prevention

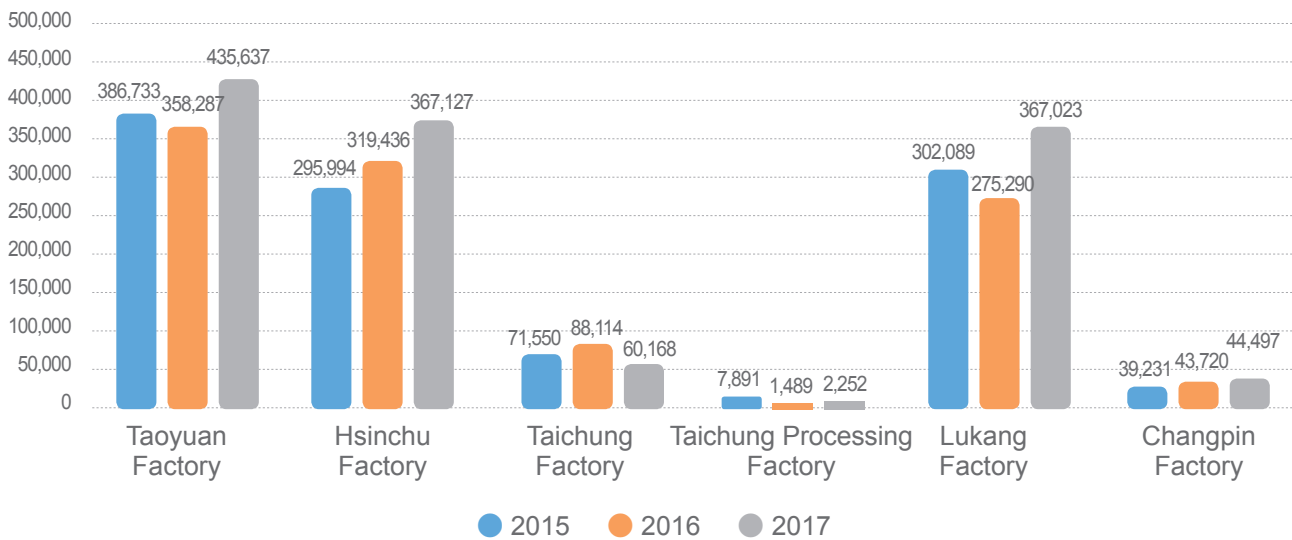
When it comes to water pollution prevention, TGI's top priority is to reduce the production waste going into wastewater. All factories have wastewater treatment equipment to reduce the pollutants in the wastewater so that the wastewater can meet the local discharge quality standards. Graywater, after being treated by the treatment system, is in compliance with the legal standard to be discharged to the surface water body. Due to production process improvement, the recycled water was used for dilution causing TGI factories discharged a total of 1,276,704 tons of wastewater in 2017, 17.5% more than 2016.

Wastewater Discharge Destination and Legal Standards		
Factory	Discharge Destination	Legal Standards
Taoyuan Factory	Guanyin Industrial Park Service Center	Guanyin Industrial Park Service Center Wastewater Discharge Limits Summary Table
Hsinchu Factory	Sanxinggong River	Water Pollution Control Act
Taichung Factory (including the processing plant)	Taichung Harbor Special District Water Recycle Center(The Taichung processing plant has a UF wastewater recycle system, which is estimated to recycle 21,000 tons of wastewater for production every month)	Taichung Harbor Special District Water Recycle Center Wastewater Discharge Standards

Wastewater Discharge Destination and Legal Standards

Lukang Factory (including Lukang Flat Glass Factory)	Changhua Coastal Park Service Center Wastewater Treatment Plant	Changhua Coastal Park Service Center Wastewater Treatment Standard
Changpin Factory	Changhua Coastal Park Service Center Wastewater Treatment Plant	Changhua Coastal Park Service Center Wastewater Treatment Standard

Wastewater Quantity of TGI Factories (by years) Units: Tons



2017 Detected Discharged Water Value

Water pollution inspection item/ factory		Taoyuan Factory	Hsinchu Factory	Taichung Factory	Taichung Processing Factory	Lukang Factory	Changpin Factory
COD (mg/L)	Detected Values	148	34	12.4	3.5	11	5.95
	Discharge Standards	<700	<100	<800	<800	<640	<640
SS (mg/L)	Detected Values	5.4	9	6.5	8.7	10.6	9.8
	Discharge Standards	<600	<50	<600	<600	<400	<400

Waste Management and Recycle

◎ Taoyuan Factory

When it comes to waste management, the Taoyuan Factory first aims to reduce waste by improving the production yield rate. The waste from this factory mainly consists of waste glass fiber, sludge, garbage, waste pallets and unrolled glass filaments. The waste processing companies use physical treatment, thermal treatment, incineration, and recycling when dealing with waste. The factory's 2017 waste recycling rate was 61% and will continue to strive to manage waste effectively, with the ultimate goal of recycling and reducing waste.



Unit: Ton

Item \ Year	Treatment	2015	2016	2017
Waste	Incineration	195	162	175
Waste Silk	Physical treatment	5,925	2,229	6,864
Waste Pallet	Recycled	47	60	103
Unwound Yarns		5,782	9,783	13,517
Sludge	Thermal treatment	1,438	2,367	1,666
Total		13,387	14,601	22,325

◎Hsinchu Factory

Waste from the Hsinchu Factory includes non-recyclables such as domestic waste and mixtures such as waste plastic, waste rubber, and waste glass. Certified cleaning companies are commissioned to collect and transport these waste to the incinerators and landfills of Environmental Protection Bureau of Hsinchu City. Sludge from wastewater treatment is recycled by qualified cleaning companies.

Recyclable waste including waste paper, scrap iron, and waste plastic is recycled by certified recycling companies. Hsinchu Factory will continue to ask all departments to sort and recycle the waste in order to reduce the total waste.

Unit: Ton

Item \ Year	Treatment	2015	2016	2017
Waste Plastic	Recycled or incinerated	168	114	110
Waste Rubber Mixture		1	1	1
Domestic Waste		308	309	299
Waste Glass Mixture	Buried	324	360	277
Sludge	Recycled	615	798	870
Waste Paper		734	677	648
Scrap Iron		880	646	408
Waste Wood		167	136	195
Waste Aluminum Caps		536	420	464
Waste Bricks		10.19	51	65.55
Waste Lubricants		8.18	3.85	15.2
Waste Insulation Materials	Buried after physical treatment	0	4	4.37
Other Corrosive Mixtures	Buried after incineration	2.18	4	1.81
Selenium and Selenium Compounded	Buried after solidification treatment	0	13	26.9
Total		3,753.55	3,536.85	3,385.83



◎ Taichung Factory

Taichung Factory commissions qualified cleaning companies to collect and recycle its waste. The waste is categorized based on its nature:

- (1) The Factory Affairs Section will sell waste including waste paper, waste metal, waste PVB films and empty waste oil containers with marked prices.
- (2) Domestic waste reduction and recycling measures: Promote waste reduction and recycling with clear labels (waste plastic, waste lamp and cans).

Waste from Taichung Factory includes flammable and non-flammable waste (waste glass and sludge), recyclable waste (waste wood; recycled glass from flat glass factory), copper sludge and human waste. All production lines produce aforementioned waste and report the waste complying with related regulations. External recycle companies are commissioned by the factory to collect and handle the waste. The majority of the waste is waste glass.

Unit: Ton

Item	Year	Treatment	2015	2016	2017
Waste Plastic		Incineration	14	12	11.31
Waste Paper			16	13	12.58
Waste Fiber			23	18	17.01
Domestic Waste			86	68	77.16
Waste Glass Mixture		Buried (non-recyclable)	729	572	363.62

Unit: Ton

Item	Year	Treatment	2015	2016	2017
Waste Wood		As fuel	4	7	4.09
Inorganic Sludge		Heat Treatment	67	58	77.03
Human Waste		Biological treatment	88	87	85.89
Waste Fire Bricks		Recycled	19	0	0
Waste Lubricants			(Exempt)	0.4	9.8
Civil Engineering Waste			0	0	0
Total			1,046	835.4	648.69

◎ Lukang Factory & Lukang Flat Glass Factory

To protect the environment and conserve energy, Lukang Factory recycles its business waste and has a dedicated department response for recycling valuable resources in the wastes.

Unit: Ton

Item	Year	Treatment	2015	2016	2017
Lukang Factory	Domestic Waste	Incineration	70	46	31.5
	Sludge	Buried	906	983	155
	Waste Fiberglass	Reuse	2,484	1,880	2,752
	Waste Oil Mixture		13	7	0
	Waste Glass Mixture	Physical treatment	279	586	1,561
	Total			3,752	3,502
Lukang Flat Glass Factory	Domestic Waste	Incineration	8	3	3
	Waste Lubricant	Reuse	0	-	0.8
	Waste Glass Mixture	Physical treatment	297	-	120
	Total			305	3

◎Changpin Factory

In order to reduce wastes, Changpin Factory checks waste sorting from all departments. Departments that do not meet the standards will receive a warning and be asked to improve the waste sorting immediately. Changpin Factory tries to find recycle companies that can recycle the waste (after solidification or heat treatment if necessary) so that the waste can become resources for the company. The amounts of sludge increased because the inorganic sludge is added apart from the copper-containing sludge. Due to the slightly decreased number of orders and higher production yield rate, the quantity of waste glass in 2017 was 361 tons lower than 2016.

Unit: Ton

Item	Year	Treatment	2015	2016	2017
Domestic Waste		Incineration	102	13	8
Sludge		Heat Treatment, Solidification treatment	21	7	20
Waste Lubricant		Reuse	2	1	2
Waste Glass		Physical treatment	1,218	735	374
Total			1,343	756	404

Chapter

5

Friendly TGI

5.1 Talent Structure

5.2 Employee Care & Training

5.3 Safe Workplace

Achievements of Friendly Workplace in 2017

99.9%

99.9% of TG' s supervisors are Taiwanese, creating many job opportunities for the local community and taking care of the locals.

Below 15%

Employee turnover rate has been steadily under 15% in the last 3 years.

100%

100% in compliance with the percentage of employees with disabilities stipulated in People with Disabilities Rights Protection Act

+99%

TGI employed an average of 89 employees with disabilities in 2017, 99% higher than the legal minimum.

1.76%

The average salary is better than the statutory salary of 1.76%.

37.37%

A total of 1,429 (37.37% of the entire staff) TGI employees are union members.

75%

A total of 24 employees took parental leave without pay for raising children and 75% of them returned after the leave.

48 employees

In 2017, 48 employees retired with an average of 26.07 years of service with the company. Senior supervisors were presented with medals from the chairman/president as a token of appreciation for their service over the years.

4,012 people


A total of 4,012 people received a health check-up in 2017.

Average 16.6 hours

In 2017, full-time employees received an average of 16.6 hours of training; junior-level manager received an average of 18.2 hours; mid-level manager received an average of 17.1 hours; while senior manager received an average of 16.7 hours.


5.1 Talent Structure

Employee Relationship Management Policy




Importance

Having excellent employees keeps TGI maintaining the competitive advantage. "Employees are the most important assets of the company." In addition to being our constant philosophy, it is also the goal that we are constantly striving to achieve.




Policy and Commitment

- Transparent and improved promotion and salary increase channels
- Positive salary adjustment plan
- Dual-track talent training development
- Healthy staff turnover




Action Method

- Regularly assess the overall performance of staff for promotion and salary increase every quarter.
- Regularly set an annual salary adjustment plan for the external economic environment and internal profitability.
- Establish a Management Associate training program. Enterprising and potential outstanding colleagues can enter the reserve training system and obtain experiences, accumulate self-strength, and enhance self-career ability.
- TGI believes that there is a healthy turnover rate of personnel in order to maintain excellent human resources. Therefore, we actively recruit new and outstanding employees, and at the same time, performance assessment is conducted every quarter to maintain the replacement mechanism.



Goals and targets

- The annual turnover rate is maintained within 15%.
- With the permission of the company's operations, the employee's entire salary adjustment assessment plan will be conducted every 2 years.



Objective evaluation

- The turnover rate in 2017 was 9.78%, which was in line with the expected target.
- In January 2017, TGI' s salary adjustment program for employees performed an average salary increase of 5%, which is in line with the expected target.

TGI treats employees as the company's most valuable assets, therefore, we want to build the best working environment that helps our employees grow. We also believe in taking good care of our employees and have established various communication channels within the company. Multiple employee relation projects help build a workplace that allows our staff to enjoy working and enjoy living. Labor rights are also the company's top priority. In addition to compliance with various labor-related regulations, we implement humanized management. TGI has a comprehensive system in talent development and employee benefits, providing our staff with a fair and reasonable salary based on their position and personal experience. When determining an employee's salary, TGI reviews that employee's education level, experience, expertise, skills, number of years of service in the industry and the average salary in the industry. We provide a starting salary that is higher than the legal minimum wage in the areas where TGI operates. Our compensations and benefits are also better than our competitors. Gender, race, religion, political affiliation, marital status or union/social club membership will not affect an employee's basic salary. All management systems and rules were formulated with compliance with Labor Standards Act and other regulations. Various levels of managers provide assistance to employees inside and outside the company. At TGI, we are just like one big family.

Human Resources Structure

By the end of 2017, TGI has a total of 4,684 employees, among which 1,289 supervisors were Taiwanese and only 1 was a foreign national. 99.9% of supervisors at TGI are local Taiwanese. This shows that TGI has created many job opportunities for the local people. All the employees are salaried workers, no contracted employees, making a stable and healthy workforce. Our employees are located in various locations in northern, central and southern Taiwan. They are all either fixed-term or non-fixed-term contracted workers. The employee structure is listed below:

Employee Gender Structure							
Year		2015		2016		2017	
Item	Category	Male	Female	Male	Female	Male	Female
Nationality	Taiwanese Employees	3,309	535	3,242	536	3,279	545
	Foreign Employees	464	31	536	50	734	126
	Sub-total	3,773	566	3,778	586	4,013	671
Total		4,339		4,364		4,684	



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Employee Seniority Structure

Item	Category	Male		Female		Total	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Seniority	Under 5 years	1,729	36.91%	316	6.75%	2,045	43.66%
	6~15 years	1,267	27.05%	167	3.57%	1,434	30.61%
	16~25 years	721	15.39%	168	3.59%	889	18.98%
	25 years or above	296	6.32%	20	0.43%	316	6.75%
	Sub-total	4,013	85.67%	671	14.33%	4,684	100.00%

Salaried/Contract Employees

Item	Category	Male		Female		Total	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Type	Salaried Employees	3,952	84.37%	658	14.05%	4,610	98.42%
	Contract Employees	61	1.30%	13	0.28%	74	1.58%
	Total	4,013	85.67%	671	14.33%	4,684	100.00%

Employee Age Structure

Item	Category	Male		Female		Total	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Age	Under 30	1,121	23.93%	235	5.02%	1,356	26.70%
	31~40	1,671	35.67%	262	5.59%	1,933	43.79%
	41~50	826	17.63%	150	3.20%	976	20.62%
	51 or older	395	8.43%	24	0.51%	419	8.89%
	Sub-total	4,013	85.67%	671	14.33%	4,684	100.00%

Employee Education Level Structure							
Item	Category	Male		Female		Total	
		Number	Percentage (%)	Number	Percentage (%)	Number	Percentage (%)
Education	Master or higher	146	3.82%	9	0.24%	155	4.05%
	College	2,011	52.59%	350	9.15%	2,361	61.74%
	High school or below	1,122	29.34%	186	4.86%	1,308	34.21%
	Total	3,279	85.75%	545	14.25%	3,824	100.00%

Note : Foreign blue collar workers were not included.

Management Structure				
Nature of work	gender	total	Ratio	Total percentage
General staff	Male	2,847	60.78%	72.48%
	Female	548	11.70%	
Supervisors	Male	1,066	22.76%	25.13%
	Female	111	2.37%	
Managers	Male	79	1.69%	1.94%
	Female	12	0.26%	
Executives	Male	21	0.45%	0.45%
	Female	0	0.00%	
Total		4,684	100%	

Recruitment

TGI complies with the laws and regulations of Labor Standards Act to safeguard our employees' human rights and privacy and keeps them from being discriminated against. Our recruitment process is fair, just and honest. All recruitment, employee selection, and employment comply with the government's rules and regulations. No employee is discriminated against (including compensation discrimination) based on his/her race, social status, language, thought, religion, political party, place of origin, birthplace, gender, sexual orientation, age, marital status, appearance, facial features, disability, or past membership in any labor union. TGI offers compensation better than other companies in the same industry. An employee's compensation is determined based on the education level, job responsibilities, position rank, experience and professional background. A new recruit's outfit, demeanor, mental situation, reaction and logic during the interview will also be factored in.

There are no risks of forced or compulsory labor in any operations of the company. The relevant labor conditions are in compliance with the Labor Standards Act. Please refer to the following table. In 2017, there were no complaints concerning the use of child labor or major labor-related issues. In 2017, TGI does not hire any child labors and is in compliance with related regulations.

2017 Labor inspection situation

Factory	Violation Details	Follow-up action plans
Taoyuan Factory	1. There are exposed wires in places prone to fire or explosion. 2. Items that are subject to rolling collision hazards are not provided with guards such as retaining posts. Fine: NT\$60,000	1. The device is no longer in use and has been removed. 2. Strengthen employee education and training.
	1. The maintenance platform of the melting material weighing area is not equipped with safety equipment. 2. In the melting material raw material dumping area, the direction indicator light is broken and the rear support frame is not set. Fine: NT\$60,000	1. The old maintenance platform has been dismantled and the maintenance platform that complies with the regulations has been used. 2. Check the plant stacker equipment, complete the improvement, and set up the rear support frame as required.

Note:

- (1) The headquarters, Taichung Factory and Lukang Factory do not have any records of inspections or violations.
- (2) The Hsinchu and Changpin Factory was inspected and did not violate any regulations.
- (3) Hsinchu Factory was in mediation with employees regarding retirement benefits and occupational injuries but in vain. The company and these employees are currently in litigation and will review the relevant system once the verdict is announced.

Staff Turnover Rate and Resignation Rate

In 2017, 374 employees resigned from TGI with a resignation rate of 9.78%. In the last three years, we have had a resignation rate below 15% annually. The company pursues the most optimal rather than the lowest resignation rate to ensure that new employees have a chance to work at TGI and the company has a healthy turnover rate. TGI hired 345 new employees with a new recruitment rate of 9.02%. This practice will also boost local employment opportunities.

New recruits in 2017

New recruits	Gender		Age							
			Male				Female			
	Male	Female	Under 30	31~40	41~50	51 or older	Under 30	31~40	41~50	51 or older
345	301	44	180	97	14	10	31	13	0	0

Note : Does not include employees on leave without pay or transferred from other TGI factories.

Resignation in 2017

Resignation	Gender		Age							
			Male				Female			
	Male	Female	Under 30	31~40	41~50	51 or older	Under 30	31~40	41~50	51 or older
374	327	47	145	134	23	25	20	16	3	8



Sustainable TGI



About TGI



Quality TGI



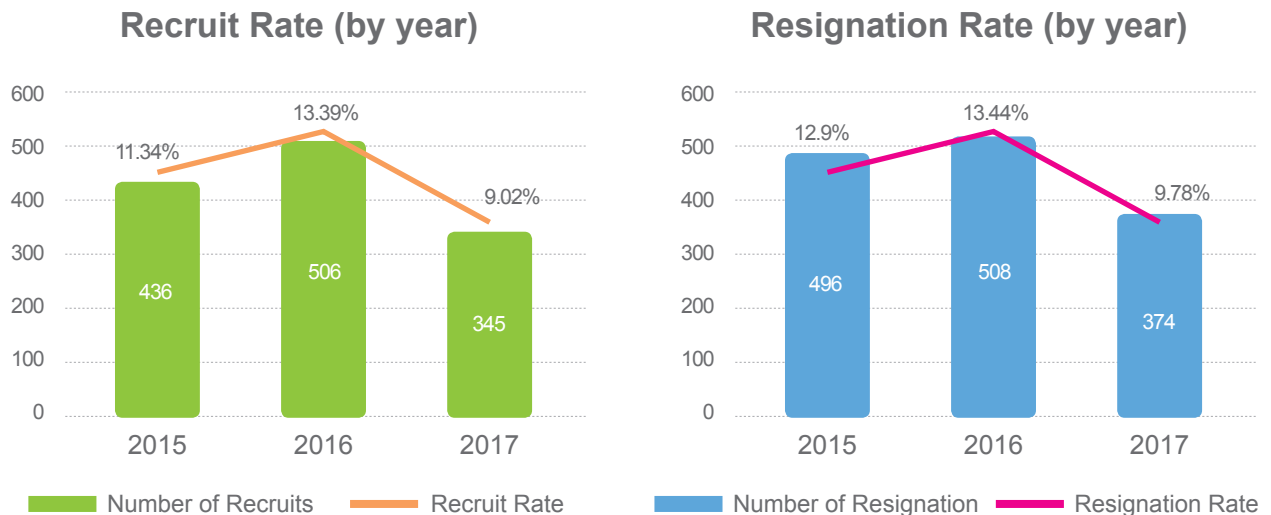
Green TGI



Friendly TGI



Appendix



Note: Recruit rate (%)= New recruits of the category/Total number of Taiwanese employees of the category by the end of the year (3,824)
 Resignation rate (%)= Number of employees of the category that left TGI/Total number of Taiwanese employees of the category by the end of the year (3,824)

A Diverse and Friendly Working Environment

TGI complies with the law regarding Employment Quota Policy with disabilities. Being in the traditional manufacturing industry, TGI is still dedicated to creating a stable, friendly and positive work environment for the employees with disabilities. At the end of 2017, TGI on average has 89 employees with disabilities monthly, 99% higher than the legal minimum. In the future, we will continue to create quality job opportunities and work environment for employees with disabilities. In addition, TGI had 25 aboriginal employees in 2017, a testament to our diversified workforce. There was no event against aboriginal employees' human right in 2017.

Lukang Factory has an LCD writing tablet at the Yarn Twisting, Weaving and Factory Affairs Department to help the employees communicate with the hearing-impaired workers. To build a friendlier working environment, TGI established the sign language club in 2015. The club holds activities periodically, such as inviting the sign language teacher from the Tsz-Ai Mercy Hospice to teach the employees to sign language and break down communication barriers among them. If a new recruit is hearing impaired, the teacher from the hospice will visit the Lukang Factory more often (3 to 4 days a week) to help create a diverse and friendly environment for workers with disabilities.

TGI's workplace-friendly column:

The practice of a diverse and friendly employment environment

Long-term practice of a diverse, inclusive and friendly employment environment

It has been more than 10 years since Lukang factory begun hiring hearing impaired employees. At present, there are 57 employees with hearing impairments working in the factory area. For example,

the average salary of the employees of TGI, and academic qualifications, performance, and other factors are included in the evaluation. The most senior employees have 13 years of qualifications, more husband and wife employees; TGI has always hoped to make a stable income for employees with disabilities, planning to expand their life blueprint.

Value the advantages of hearing impaired employees

Zhuang Yulin, manager of the factory of Lukang plant, said: "The sound of factory crepe and weaving machines are loud. Generally, employees have to wear earplugs, but employees with hearing impairments do not have noise problems and can concentrate more on work. Their innocence and kindness and loyalty are advantages. Now even the inspection work in non-noise areas has opened up the use of hearing-impaired employees and affirmed their ability to work."

Love overcomes obstacles

In order to work more closely with employees, the company has established a sign language club in the past few years. Apart from employees with hearing impairments, there are also general employees to join in learning. Early communication is by hand-writing. Now there is an electronic board as an aid to make it easier for hearing-impaired employees integrate into the workplace.

News Reports and Work Situation of Hearing Impaired Employees in TGI Lukang Factory

Reference: <https://udn.com/news/story/7325/2760467>



Employee Benefits

Fair Performance Management System

We assess our employees based on their education level, experience, expertise, seniority, and performances. Gender, race, religion, political affiliation, marital status and membership in unions/social clubs will not affect our employee assessments. With the exception of foreign blue-collar workers and local workers still on probation, all TGI employees receive regular performance assessment mainly based on their job performances. Their work efficiency and sense of responsibility are also evaluated. Each employee receives a different bonus based on the company's overall performance and his/her

performance and contribution to the company. We pay great attention to employee compensation and benefits.

The male-to-female ratio of a basic salary of TGI in 2017 was 1:0.93, and the overall difference was less than 0.07. The analysis of this minor difference reflected the differences in job content and qualifications. TGI upholds equal pay for equal work and does not differ by gender. In addition, the personnel unit continuously tracked and analyzed the salaries of the general staff, which was better than the statutory salary of 1.76%.

Union

TGI's labor-management measures are all in compliance with governmental regulations, including Labor Standards Act, Act of Gender Equality in Employment, Occupational Safety and Health Act and Labor Insurance Act. To maintain an open communication channel between the company and the employees, TGI established labor union, which holds meetings with directors, supervisors, and members regularly. TGI's related personnel also attend such meetings to respond to all the suggestions for improvement proposed during the meetings. Issues such as employee health and safety are also discussed during the meetings. The labor union holds a meeting every 3 months and member representative meetings every year. Representatives are selected with a majority vote. The union holds meetings regularly to discuss employee related affairs such as employee dining in the factories, group casualty insurance, travel and year-end feasts. There is also an online suggestion box, bulletin board and phone number, which the employees can take advantage of to express their opinions. This allows the company to respond and deal with issues in a timely manner. Since some factories do not have unions in them, a total of 1,429 employees are union members, accounting for about 37.37% of the entire company staff.



Representative Meeting



Employees' Suggestion Box and Bulletin Boards



2017 Union Participation		
Factory	Hsinchu	Taichung
Male	847	467
Female	83	32
Total	930	499
Ratio	100%	78.96%

Note:

1. The number of employees in Hsinchu Factory does not include that of foreign workers, and all the employees are union members in Hsinchu Factory.
2. The Lukang Factory union could not provide related information.
3. No union was established in Taoyuan Factory, Lukang Flat Glass Factory, and Changpin Factory.

Benefit committee

To provide adequate support to employees and ensure their living conditions, TGI provides or sponsors the promotion of relevant welfare programs in addition to providing basic protection according to the law and organizes the staff benefit committees to take charge (planning and implementing) of the benefit measures of all colleagues. The current welfare measures are as follows:

Employee Benefit and Welfare Measures	
Benefit Measures	Company annual trip, cash incentives for a birthday, wedding, funeral, mid-autumn festival, dragon boat festival and Chinese New Year and social club activity subsidies.
Company Measures	Factories have dormitories and cafeterias, providing affordable, safe and convenient room and board for our employees.
Meal allowances	Encourage employees to participate in company meal plans with 50% subsidy.
Excellent Insurance	TGI provides our employees the best care and protection. In addition to labor insurance and health insurance, TGI has taken out a group insurance policy for our staff to give them even better protection and coverage.
Staff Health Management	➤ Regularly carry out employee health checks, covering general health checks, special health checks, and other items.
	➤ Follow up for employees with abnormal health check results.

Employee Benefit and Welfare Measures

<p>Comprehensive Employee Care</p>	<ul style="list-style-type: none"> ➤ Shall any family member of our employees requires personal care by our employee due to mishaps, our employee can apply and take a 2-year leave without salary after the company approves. ➤ Employee's family members can pay and take out the same company group casualty insurance as TGI employees. ➤ Employee family care consultation service (employee care program).
<p>Retirement & Pension</p>	<p>TGI has its own employee retirement program. We also provide comprehensive pension to families of our employees who suffer from injuries or even loss of life on duty.</p>
<p>Further Education and Training</p>	<p>To help our employees learn new skills or when company business requires, TGI selects and sends our hard-working employees to other countries to observe and study, on an internship or receive training. The company also holds lectures, on-job training or commission professional training institutions to help our staff grown and enhance their professional skills.</p>
<p>Scholarship for Employee's Children</p>	<p>TGI awards scholarships to all employees' children every year, to encourage their academic excellence and stimulate their motivation to study.</p>

2017 Social Group Activities in TGI



Badminton Club Exhibition (at Wu-qj Elementary School)



Cycling Club Activities (at Kaomei Wetland)



Basketball club activities (at Shalu basketball court)



Taoyuan Factory Jogging Club Activity (Taoyuan Council Speaker Cup Road Running)



Lugang Factory Slow Pitch Softball Championship



Hsinchu Factory Cycling Club (in Hakka Round House)

Parental Leave

24 TGI employees took a parental leave in 2017, 75% of them were reinstated. Among those, female workers accounted for 37.50% and male workers accounted for 62.50%. TGI believes in a balance between family and work and there will not be differential treatment based on gender when it comes to applying for a parental leave. In 2017, on average 77.78% of female workers and 73.33% of male workers are reinstated after a parental leave.

Reinstatement after Parental Leave (2017)	Male		Female		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
A. Number of Workers Scheduled for Reinstatement (=B+C)	15	62.50%	9	37.50%	24	100.00%
B. Number of Reinstated Workers	11	45.83%	7	29.17%	18	75%
C. Number of Workers that Resigned after Parental Leave	4	16.67%	2	8.33%	6	25%
Reinstatement Rate (B/A)%	73.33%		77.78%		75%	

Between 2016 and 2017, 30 employees were reinstated after a parental leave in 2016. For the 25 among them, 2017 marked 1 year since their reinstatement at TGI with an average retention rate of 83.33%. The retention rate for female workers is 100.00% and 68.75% for male workers.

Reinstatement after Parental Leave (2016-2017)	Male		Female		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
E. Number of Reinstated Workers after a Parental Leave in 2016	16	53.33%	14	46.67%	30	100.00%
F. Number of Reinstated Workers after a Parental Leave in 2016 with 2017 Marking One Year after their Reinstatement	11	36.67%	14	46.67%	25	83.33%
Retention Rate (F/E %)	68.75%		100.00%		83.33%	

Mother-Friendly Workplace

For pregnant women and women within one year after giving birth, we conduct a risk assessment of their work environment and categorize and manage their health conditions. Doctor visits are arranged to provide appropriate assessment and advice. We follow up regularly with mother employees and provide them with health education information based on their stages of pregnancy. Their workload/duties can be adjusted accordingly to ensure their workplace safety. Pregnant employees at TGI have their dedicated parking spaces. Our facilities are also equipped with breastfeeding rooms where mother employees can pump during working hours, allowing them to take care of their family and job at the same time.

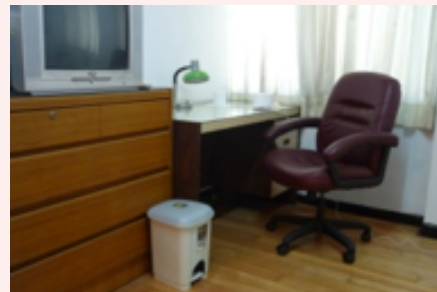
The breastfeeding room looks warm and welcoming. The soft colors can create the most relaxing and comfortable atmosphere. TGI has formulated and put in place a guideline on breastfeeding rooms. The rooms come with locking doors, comfortable couches and breastfeeding pillows, breast milk refrigerator, pure water baby wipes, bottle sterilizer, spare breast milk bags and glass bottles. All the items are free of charge and all the breastfeeding rooms are cleaned every day and the temperatures of the refrigerators are also monitored. TGI also provides breastfeeding related information, activities, and consultations. As a mother experiences physical changes during the pregnancy, TGI provides necessary support and arranges other experienced colleagues to help these new mothers. All in all, we strive to provide the friendliest workplace for mothers.



Breastfeeding/breast milk collection room-Taipei



Breastmilk refrigerator with its guideline and suggested storage time



Breastfeeding/breastmilk collection room-Taichung Factory



Breastfeeding/breastmilk collection room-Taoyuan Factory



Breastfeeding/breastmilk collection room guidelines and pantry room sign



Breastfeeding consultation and experience sharing



Breastmilk information and magazines



Milk bottle sterilizers, breastmilk bag and glass bottles allow mothers to collect milk without their own containers.

Retirement system

TGI, based on Labor Standards Act and Labor Pension Act, has formulated a retirement policy. The coverage of the TGI employee retirement system is 100%. In addition to appropriating pension to the respective accounts regularly, TGI has a professional accounting consultant that precisely calculates the pension to ensure that the company appropriates enough pensions every month so that our employees can receive a pension after retirement. According to Labor Standards Act, a worker may apply for voluntary retirement when he/she attains the age of fifty-five and has worked for fifteen years, has worked for 25 years or above, or attains the age of sixty and has worked for ten years. In TGI, our work rules state that any employee who attains the age of forty-nine and has worked for fifteen years or has worked for nineteen years may apply for early retirement with the company's approval. This rule is more favorable to employees than Labor Standards Act.

In 2017, 48 employees retired, with an average of 26.07 years of service. Senior supervisors were presented with medals from the chairman/president as a token of appreciation for their service over the years.

Minimum Period of Advance Notice of Labor Contract Termination

Where TGI terminates a labor contract pursuant to Article 11 or the provisions of Article 13, the provisions set forth below shall govern the minimum period of advance notice :

1. Where a worker has worked continuously for more than three months but less than one year, the notice shall be given ten days in advance.
2. Where a worker has worked continuously for more than one year but less than three years, the notice shall be given twenty days in advance.
3. Where a worker has worked continuously for more than three years, the notice shall be given thirty days in advance.

5.2 Employee Care & Development

To develop professional talents, provide diverse learning opportunities and pass down the company's mission, vision and core values, TGI has established a well-rounded staff training policy and procedure for the company's sustainability. The company provides staff orientations, common courses, professional courses, management courses, self-development courses and an array of diverse options. Each year we plan training courses based on the company's strategy, needs of various departments and a survey on staff for their training needs. The orientation for new employees includes courses on human rights and related regulations. TGI provides training courses to develop talents, improve factory productivity, product quality, and manufacturing efficiency.

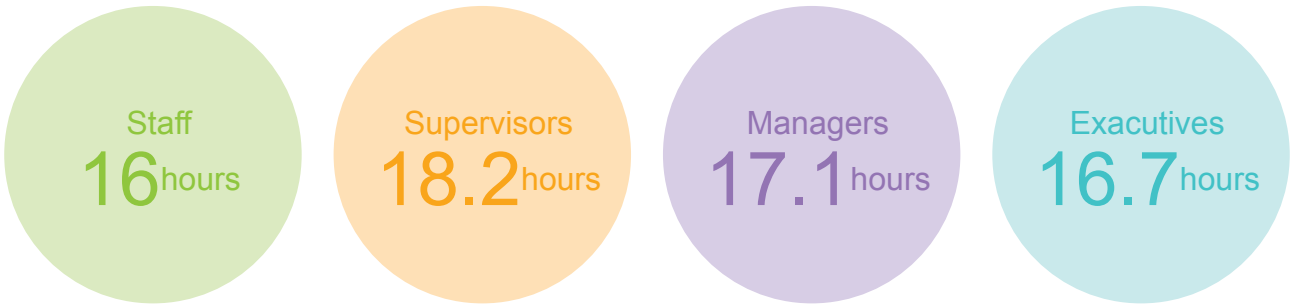
In response to the needs of the future high-tech market, developing photovoltaic, energy-saving, touch-responsive glass professionals to enhance competitiveness and avoid lack of skilled labors in TGI. The company's good training and education can improve the competitiveness, such as: standardization of primary level employees' duties and enhancement of supervisors' management. TGI also continues to promote the education of workplace safety and health, helping our staff develop great work habits. As our staff continues to improve, our working environment can be conducive to their continuous growth. TGI believes in improving the professional skills of the staff to enhance the quality of our manpower. Therefore the company provides employees with a variety of learning channels as below :

Education and Training System for TGI Employees	
New employee orientation and education	1.Common courses (including corporate culture, history, system regulations, etc.)
	2.Professional courses (including professional document reading, factory internship, etc.)
On-the-job education and training	1.Annual education and training plan: All units and departments report the needs for the courses at the end of the year to determine the planning and schedules of the courses for the following year.
	2.Application for external training: Depending on the needs of each department, employees will be selected to participate in the external training to strengthen professional knowledge.
Skill training	To cultivate talents with professional skills, staff with excellent performance will be selected to go abroad for observation, practice, and training.

To implement the education and training, TGI set up a dedicated manpower and teaching unit for the planning of education and training and the development of an annual training plan. The professional curriculum planning, training and exercise programs all aimed at developing the necessary glass-related technical and management talents. If a type of job requires competency in other skills (such as education, skills or license, experience, etc.), then the Factory Affairs Section will select and evaluate

new recruits. For example, the operation of overhead cranes and forklifts requires a professional license from a government registered external training institution. Education and training can also familiarize the employees with safety and health regulations and manufacturing techniques. This can boost the skill levels of the employees, product quality, environmental safety management and the company's performance. As the result, the product quality can be consistent and stable and therefore meet our clients' needs.

The average of staff education & training of TGI in 2017



2017 TGI Staff Education & Training Statistics							
Employee	Factory	Male		Female		Total	
		Number	Hours	Number	Hours	Number	Hours
Staff	Headquarter	18	221.5	19	194.5	37	416.0
	Taoyuan	287	6,841.0	81	2,068.5	368	8,909.5
	Hsinchu	866	11,401.5	81	1,090.0	947	12,491.5
	Taichung	345	5,217.5	31	338.0	376	5,555.5
	Lukang	639	12,042.0	184	2,138.0	823	14,180.0
	Lukang Flat Glass	123	2,671.5	9	116.0	132	2,787.5
	Changpin	260	2,862.5	32	384.0	292	3,246.5
	Total	2,538	41,257.5	437	6,329.0	2,975	47,586.5
	Average Hours	16.3		14.5		16.0	
Supervisors	Headquarter	31	542.0	40	501.5	71	1,043.5
	Taoyuan	139	3,061.0	13	336.0	152	3,397.0
	Hsinchu	290	7,161.0	10	251.0	300	7,412.0
	Taichung	233	2,991.5	6	94.0	239	3,085.5
	Lukang	162	2,547.0	13	129.0	175	2,676.0
	Lukang Flat Glass	65	1,298.0	2	33.0	67	1,331.0
	Changpin	120	1,474.0	1	10.0	121	1,484.0
	Total	1,040	19,074.5	85	1,354.5	1,125	20,429.0
	Average Hours	18.3		15.9		18.2	

2017 TGI Staff Education & Training Statistics

Employee	Factory	Male		Female		Total	
		Number	Hours	Number	Hours	Number	Hours
Managers	Headquarter	15	278.0	7	178.0	22	456.0
	Taoyuan	4	37.0	0	0.0	4	37.0
	Hsinchu	18	451.0	1	36.5	19	487.5
	Taichung	15	152.0	1	9.0	16	161.0
	Lukang	5	31.0	0	0.0	5	31.0
	Lukang Flat Glass	3	16.0	0	0.0	3	16.0
	Changpin	4	63.0	0	0.0	4	63.0
	Total	64	1,028.0	9	223.5	73	1,251.5
	Average Hours	16.1		24.8		17.1	
Executives	Headquarter	6	116.0	0	0.0	6	116.0
	Branch Factories	1	1.0	0	0.0	1	1.0
	Total	7	117.0	0	0.0	7	117.0
	Average Hours	16.7		0.0		16.7	

Training at TGI facilities in 2017



Companywide training on Japanese Course (Basic Level)



Key Performance Indicators (KPI) Establishment and Action Plan at headquarters.



Companywide training on Self-defense fire marshaling training



Forklift operator Training at Changpin Factory



Overhead cranes on-the-job training at Changpin Factory



Supervisors management training at Hsinchu Factory

Training at TGI facilities in 2017



Information Security Education Training at Taichung Factory



First aid education and training at Changpin Factory



Supervisors Management training at Taoyuan Factory



staff orientations at Taoyuan Factory



Information Security Seminar at Lukang Factory



Office software education and training at Lukang Factory



Self-defense fire marshaling training at Taichung Factory



Productive management class at headquarters.



Productive management class at Hsinchu Factory



Productive management class at Hsinchu Factory



Productive management class at Taoyuan Factory



Key Performance Indicators (KPI) Establishment and Action Plan at Taoyuan Factory



Sustainable TGI



About TGI



Quality TGI



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Appendix

5.3 Safe Workplace

Occupational Safety and Health Management Policy



Importance

According to law, a special management unit was set up to supervise related operations in the factory to prevent accidents or occupational disasters so that employees can improve work efficiency and product quality in a safe operating environment.



Policy and Commitment

The objectives of the TGI occupational disaster management are based on the zero-disaster target and serve as an indicator to increase safety activities in the plant area.



Action Method

The accident management system is based on the TGI's occupational safety and health management measures, the implementation of the notification, investigation, and completion of the process of predicting hazards improvement, implementation of the notification, investigation and completion of procedures for improvement of the desired hazards. In addition, the statistics of the occupational disasters and the reasons for the clarification of the accidents are also implemented every six months, and they are listed as the focus of prevention. All units are advised of the focus and methods of prevention in order to effectively reduce recurrence of the same type. If there are major accidents in other companies, all departments will be informed within the first time of the relevant safety requirements for each unit's corresponding risk operations.



Goals and targets

The objectives of TGI' s accident management system are based on zero disasters and serve as indicators for increasing safety activities in the factory area. The rate of Disabling Frequency Rate (FR) and Disabling Severity Rate (SR) are expected to reduce by 20% separately.



Objective evaluation

In 2017, FR: 8.26, SR: 136 are both higher than 2016 mainly due to the number of car accidents of commuting employees and accidents caused by pinch injury increased. Even if the indicators did not perform as expected, we expect that in 2018, we will achieve the goal of zero disasters by expanding our concrete actions.

Labor Safety and Health Committee

TGI's management takes environmental safety and health very seriously. The company has safety and health guidelines in place and always notifies the relevant authority when needed. Our Labor Safety and Health Committee's mission is to formulate safety and health-promoting strategies, company-wide safety, environmental and health-promoting objectives and to implement and revise relevant plans when necessary. The headquarters and all factories of TGI all have a safety and health committee, which provides an open channel for communication. 1/3 of the committee members are employee representatives, as required by law. The committees hold quarterly meetings to discuss safety and health-related issues. The meetings serve as a formal platform allowing horizontal communications between all departments and vertical communications between the management and the employees. The headquarters and the factories all have dedicated labor safety management units (Labor Safety Section), which conduct a labor safety inspection every month to detect a problem and take precautionary measures as early as possible. The Labor Safety Sections in all facilities are committed to promoting environmental safety & health as well as risk control. They also report to the highest-ranked supervisor, relevant authorities and labor representative during safety and health committee sessions every quarter. The "5S" plan provides education and training to new recruits and current employees to enhance their working safety awareness and ability to handle situations at work and prevent accident to ensure staff safety and health and a safe and healthy working environment.

Main Issued Discussed During the Labor Safety and Health Committee Sessions:

1. To make recommendations on occupational safety and health policies.
2. Coordinate and propose occupational safety and health management plan.
3. Review the safety, health education and training implementation plans.
4. Review the operational environmental monitoring plan, monitoring results, and measures.
5. Review the health management, occupational disease prevention and health-promoting measures.
6. Reviews various safety and health proposals.
7. Review the automatic inspections and safety & health audits of all business units.
8. Review the disaster prevention measures of machinery, equipment or raw materials and materials.
9. Review the occupational injury investigation reports.
10. Assess on-site safety and health management results.
11. Review the operational safety and health management matters in contracted work.
12. Other matters related to occupational safety and health management.



2017 Changpin Factory Occupational Safety & Health Committee Session



Committee Member/Employee Representative Ratio in 2017							
Item/Factory	Headquarters	Taoyuan	Hsinchu	Taichung	Lukang	Changpin	total
Committee Members	15	18	16	24	15	55	104
Employee Representatives	5	7	6	8	5	20	38
Ratio	33.33%	38.89%	37.50%	33.33%	33.33%	36.36%	36.54%

Note: Based on the law, Lugang Flat Glass Factory does not need to establish a labor safety and health committee, but it still continues to promote employee education and training programs every year to strengthen the occupational safety and health awareness.

Occupational Safety Management

The objective of the disaster management is to reduce the disability frequency (FR) and the severity of the disability injury (SR) by 20%, as the starting point of the zero disaster target and as an indicator to enhance the safety activities of the factories. The accident management system of TGI requires the unit/supervisor of the injured person to complete and file “Employee Injury Report” and “Employ to/from Work Injury Report” within 3 days of the accident. The reports must be signed by the unit safety manager, department supervisor, Labor Safety Section and Safety & Health supervisor (in this order) before being submitted to the highest supervisor. The original of the reports will be archived by the Labor Safety Section and the duplicates will be archived by the Human Resource Department and Injury/Accident Unit. This practice ensures that all accidents are reported and investigated and improvement measures are taken accordingly. TGI also compiles the occupational injury/accident numbers every six months to understand the causes and make them the first thing to prevent in the facilities. The company notifies all units of the results and preventive measures to prevent the same types of injuries or lower the severity of such injuries. If major accidents take place in other businesses, TGI will notify all units and ask them to promote safety further in all operations with the risk of identical accidents. The 2015-2017 safety indicators are as follows:

Item/Year	Gender	2015	2016	2017
Disabling Frequency Rate (FR). Total Disabling Incidents (more than 8 hours of rest) x 1,000,000/ Total Manhours	Male	9.10	6.92	8.43
	Female	6.33	8.01	7.17
	Total	8.74	7.07	8.26
Occupational Disease Rate (ODR). Total Occupational Diseases x 1,000,000/ Total Manhours	Male	0	0	0
	Female	0	0	0
	Total	0	0	0
Disabling Severity Rate (SR) Days Charged x 1,000,000/Total Manhours	Male	150	86	119
	Female	45	32	244
	Total	137	79	136
Absence Rate (AR) Total number of days lost / Total days Worked	Male	0.01	0.01	0.01
	Female	0.02	0.02	0.02
	Total	0.01	0.01	0.01

Note: Total days of absentee include the number of days of leave, sick leave, and work-related injury leave.

- (1) Sick leave (including unpaid sick leave, half-pay sick leave, menstruation leave): 38,403.5 hours
- (2) Leave (including family care leave): 32,896 hours
- (3) Work-related injuries: 14,910 hours
- (4) Total working hours: 9,082,528 hours

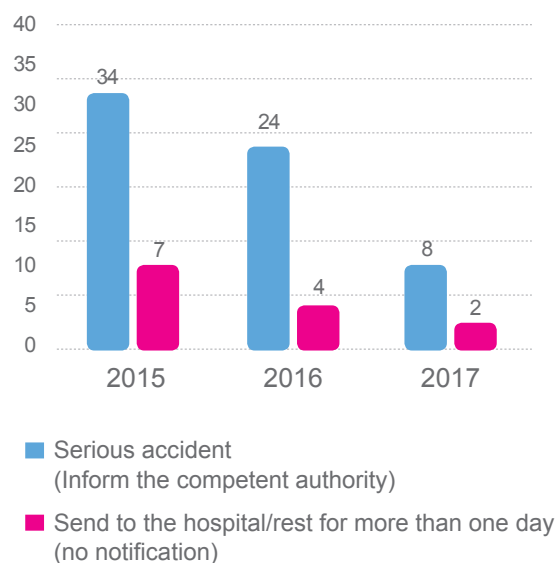
Multiple Management Mechanisms Establish a Zero-Injuries TGI

In order to achieve the goal of zero occupational injuries, in 2017, TGI hired the British industrial security consultant Warwick Mayall to promote the occupational safety principles of Taoyuan, Taichung, and Lukang (including Lukang Flat) Factories. At the same time, he collected and analyzed the data related to factory occupational injuries and then recommended that employees should learn from minor work injuries, such as minor injuries and thrilling incidents that can be treated on site, so as to prevent accidental injury in advance and require employees to help each other, be responsible for the safety of their work, and build a safe working environment.

Work safety principles:

1. "Employee" is the key to the success of a safety and health management program.
2. All injuries and occupational diseases can be prevented.
3. Every employee has a responsibility to prevent possible injuries and illnesses.
4. Emphasis on safety is one of the conditions of employment, and each employee must bear the responsibility for workplace safety.
5. Labor safety training is the foundation for establishing a safe workplace.
6. A continuous labor safety audit is necessary.
7. All security deficiencies must be corrected immediately.
8. Investigating possible accidents is just as important as investigating accidents that have occurred.
9. Safety after work and safety at work are equally important.
10. Preventing workplace injuries can bring effective benefits.

The consultants collected the data collected by Taoyuan, Taichung and Lukang (including Lukang Flat Glass) Factories in terms of the standards and shows them as the chart on the right. It shows that the major injury cases in the past three years have decreased year by year, and in 2017, they fell by 64% compared with 2016, which presented effective work safety management can help reduce the incidence of major occupational injuries.



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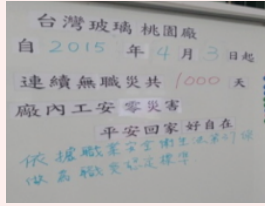


Appendix

Relevant labor safety measures of each factory



Propaganda of Factory workplace safety



Occupational Injuries Statistics Board of Taoyuan Factory



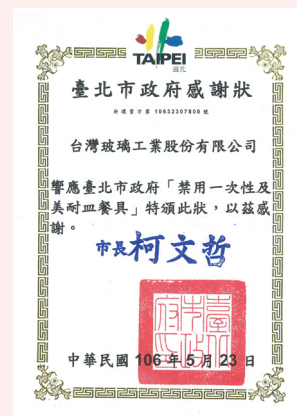
Occupational Injuries Statistics Board of Taichung and Lukang Tablet Factory



Employee Health Promotion

2017 employee health promotion performance

- Implementing environment-friendly and healthy eating habits, responding to the Taipei City Government's "Disabling Disposable and Melamine Tableware", and encouraging people to bring reusable cups or use glassware tableware during meetings or events to implement environmental protection concepts with practical actions.
- Conduct a quarterly physical and mental health questionnaire survey for each shift employee on the site. The results of statistical analysis are used as a reference for further medical treatment or adjustment of work positions.
- Headquarters has equipped with a nursing room
- The factories continue to promote health promotion courses, such as physical fitness, psychological stress management and scald protection lectures. They also keep encouraging colleagues to participate in and form sports associations to promote physical and mental health of employees.



The deputy mayor of Taipei City, Deng Jiayi, issued a certificate of appreciation to TGI, responding to the "disabled disposable and melamine tableware"



TGI and each factory set up a health center and equipped with professional factory protection and special on-site service specialists to promote health management programs including health care, special protection, health promotion, etc. We expect to balance practical needs and risk management and continue to do efforts in occupational injuries with disease prevention actions and measures to promote the physical and mental health of employees.

Based on the relevant provisions of the Regulations of the Labor Health Protection” , TGI regularly arranges employees to receive physical examinations to provide a healthy and hygienic working environment for employees. The company has commissioned professional physicians to manage the employees’ health on the basis of the physical examination results. 1,658 employees received general physical examinations and 2,354 received special physical examinations, a total of 4,012 in 2017.

The kiln at the Taichung Factory produces extreme heat and therefore the factory has in place the “Prevention Plan for Ailments Induced by Exceptional Workload” and takes necessary prevention and improvement measures accordingly to make sure all the employee’ s work hours, breaks and days off work are in compliance with the labor regulations, which can contribute to physical, mental health and balanced family life for our employees. The Lukang Flat Glass Factory produces extreme heat, noise, dust and ionizing radiation. Therefore it measures the temperature and noise level every 6 months in compliance with the law, which has never exceeded the legal limits. To protect the health of our employees, the factory arranges special examinations specifically for dust and ionizing radiation.

In 2017, the “Occupational Safety” department, based on the work hour sheets from Human and other scales, selected a group of employees with potential risks from employees with excessively long hours, excessive shifts and other factors contributing to cardiovascular diseases such as overweight, smoking, unusual blood pressure and diabetes. The department evaluated this group of employees and arranged doctor appointments. Some employees were referred to other treatment and some were provided with health education. The department adjusted/limited the job responsibilities of these employees if needed and continued to follow up to protect the employees’ physical and mental health as well as the company’ s rights.

2017 Physical Examination Statistics

Special Physical Examination Statistics								General Physical Examination	total
High Temperature	Dust	Noise	n-Hexane	Lead	Chromic acid and chromates	Ionizing radiation	total		
380	409	1,384	5	60	12	104	2,354	1,658	4,012

2017 Health Checkup Images



Staff Health Management

Health Monitoring-ups (pre-employment physical examinations and regular employee physical examination):

New employees must complete a physical examination before starting working at TGI. The company uses the examination report to assign new employees to a suitable position, place them in the correct category for management, provide health education and keep track of the employee's health. Our formal employees receive a health checkup every two years. For those in hazardous positions, they receive sanitation and health education four times a year and a special physical examination. The results are submitted to the company's nurse practitioners stationed at each factory who analyze and preserve the reports to understand the employees' health. Nurse practitioners will provide health education to those at high health risk and arrange them for repeat doctor visits to keep track of their health condition and help them receive treatment if necessary. The nurse practitioners will follow up with employees' health conditions and evaluate whether or not they are fit for their current positions. When needed, they will help employees get reassigned to other positions. Health-promoting activities are planned based on the staff's health conditions.

To enhance our employees' work safety and sanitation knowledge, TGI provides occupational safety and health training, emergency response and fire drills and off-site professional training for new employees. In addition, this company holds environmental safety and health training sessions for employees monthly.

Depending on the season and current epidemics, we provide related health information in the company's regular announcements and the company's electronic bulletin board to help our employees prevent themselves from getting the disease. For our high-risk employees, we recommend that they receive a vaccine. The company also provides information for family care for our employees.

Our health center is equipped with a full body composition monitor, which can measure body weight, body fat, body age, BMR, visceral fat and the subcutaneous fat and skeletal muscle of the entire body, arms, torso, and feet. This equipment helps our employees manage their health and weight loss progress.

Employee Health Management Images



Health seminar at headquarters



Hsinchu Factory Human Factors Project - Elimination of Back Pain Health Talk



Taichung Factory – Hazard prevention in high heat and dusty operating environment



Hsinchu Factory-CPR Training



Taichung Factory – Colon cancer prevention



Lukang Factory and Lukang Flat Glass Factory - Blood Pressure Control Lecture



Taichung Factory – Safety & Health Training: New CPR Training



Taichung Factory – Safety & Health Training: Hazards from noisy operations and hearing protection



Changpin Factory - Metabolic Syndrome Talk



Changpin Factory - Burn Prevention Seminar



Changpin Factory - Mental Health Seminar - Positive Perspective



Changpin Factory - Changhua County Breastfeeding Room Certification



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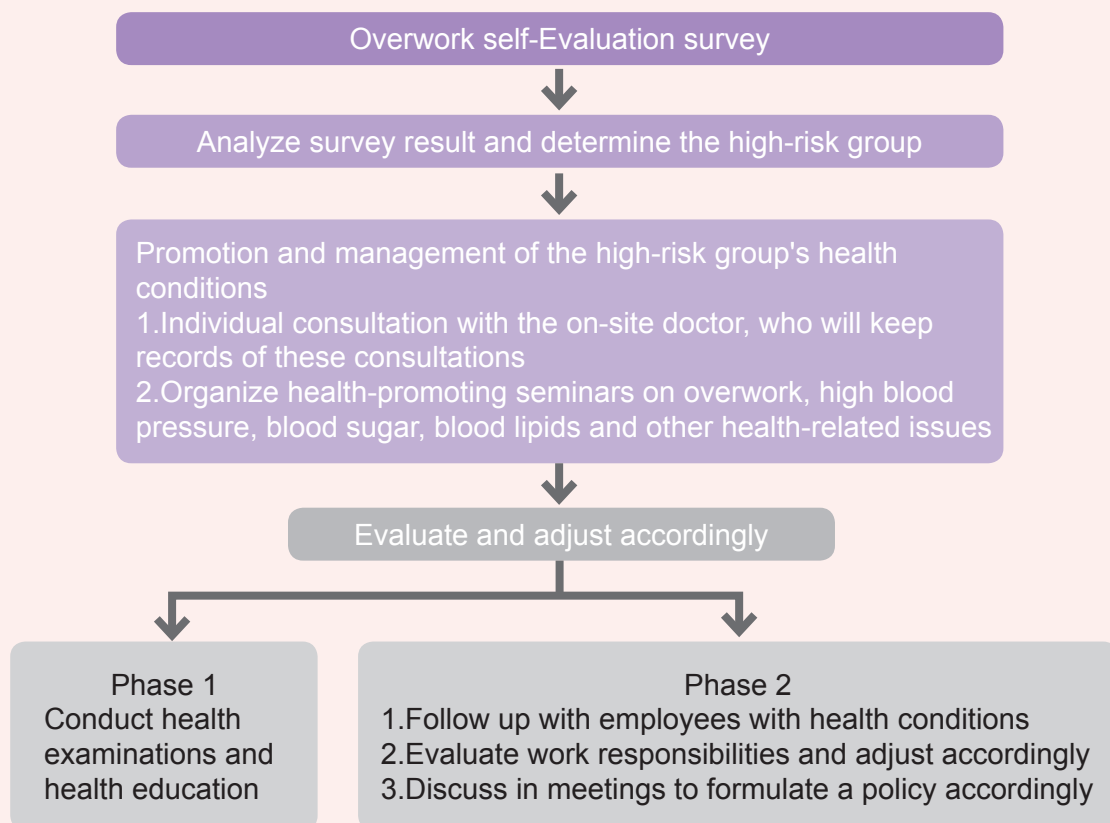


Appendix

Plan to Prevent Disease Caused by Unusual Workload:

TGI keeps track of and evaluates risks of our employees' health conditions, nature of work (shifts, night shifts, long work hours and unusual workload) and work hours. For employees with potential health risks, TGI arranges for employees to provide them with health education or refers them to seek medical assistance from doctors. The company also helps such workers adjust their workload and shares with them about health-promoting activities. All the measures aim to prevent brain and cardiovascular diseases among our employees and reduce their mental load to be healthy both physically and mentally.

Exceptional Workload Improvement Flow Chart



Ergonomic Injury Prevention

TGI collects data on the employees' nature of work and analyzes it to divide employees into different categories for management. Then this company offers suggestions to help employees improve their work condition, recover from any muscle/bone injuries and prevent them from repeated muscle/bone injuries by creating a better, safer and more ergonomic

working environment. The following is an example of the execution procedure of TGI's section chief of Chopped Strands section:

- On-site doctors and nurses will, with the section chief of Chopped Strands section, observe the workers in the section as they move finished glass products.

- As workers move the finished glass products, as long as the desktop of their working desks is between their shoulder and waist, they are ergonomically safe. The section is spacious, allowing them to use proper postures as they work. Glass products of more than 10 kilograms will be carried by two or more workers, depending on the weight. However, this task causes repetitive strain and therefore ergonomic injury prevention is still necessary.

- Our on-site doctors will supervise and make sure the workers use proper postures as they move the glass products and wear proper protective gear to prevent cuts and musculoskeletal diseases.



On-site doctors and nurses will, with the section chief of Chopped Strands section, observe the workers in the section as they move finished glass products

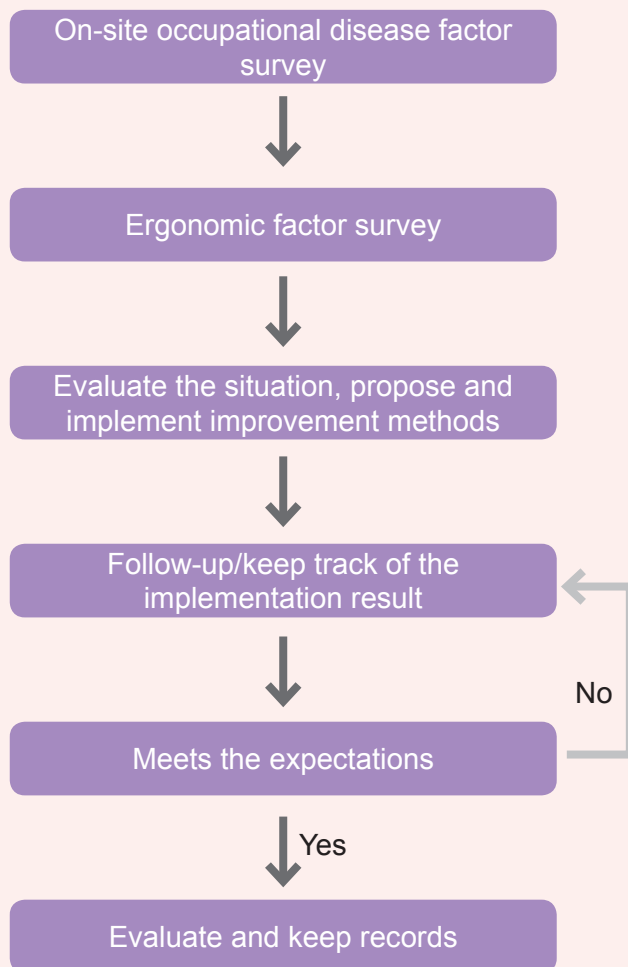


Glass products of more than 10 kilograms will be carried by two or more workers, depending on the weight.



On-site doctor show the workers how to stretch properly and the exercise to build muscle endurance.

Ergonomic Injury Analysis and Improvement Flow Chart



Contractors Management

In accordance with the “Contract Management” of the “TGI Safety and Hygiene Management Plan”, TGI reinforces the contractor’s awareness of safety, health, and management through regular two-way communication meetings and aperiodic construction safety courses. Besides, for high-risk operations, together with contractors, we complete the work hazard identification, risk assessment analysis, and emergency response plan.

For the education, training and communication with contractors, and the contracting units are required to provide safety and health education training to the contractors when signing the contract. The contents include the common hazards and prevention methods in the project or operation. In addition, the contracting unit needs to organize the meeting with the contractor and inform the hazards.



Contractor's Entry Plant Agreement

Appendix

Appendix I: Global Reporting Initiative (GRI) Standard Index

The following content has been verified by an independent third-party and the result is published in the independent assurance report in Appendix V. “*” indicates Material Topics while “●” indicates external verification.

General standard

Option	No.	Disclosure	External Verification	Chapter	Page
Core	102-1	Name of the organization	●	2.1 Introduction	19
Core	102-2	Activities, brands, products, and services	●	2.1 Introduction 3.1 Product Introduction	19 48
Core	102-3	Location of headquarters	●	2.1 Introduction	19
Core	102-4	Location of operations	●	2.1 Introduction	19
Core	102-5	Ownership and legal form	●	2.1 Introduction	19
Core	102-6	Markets served	●	2.2 Operating Information	26
Core	102-7	Scale of the organization	●	2.1 Introduction 2.2 Operating Information	19 26
Core	102-8	Information on employees and other workers	●	5.1 Talent Structure	87
Core	102-9	Supply chain	●	3.5 Sustainable Supply Chain	60
Core	102-10	Significant changes to the organization and its supply chain	●	2.1 Introduction	19
Core	102-11	Precautionary Principle or approach	●	2.4 Risk Management 3.2 Product Quality Management	37 52
Core	102-12	External initiatives	●	About This Report 3.2 Product Quality Management	2 52
Core	102-13	Membership of associations	●	2.1 Introduction	19
Core	102-14	Statement from senior decision-maker	●	Message from the Chairman	4
Comprehensive	102-15	Key impacts, risks, and opportunities		Message from the Chairman 2.4 Risk Management	4 37
Core	102-16	Values, principles, standards, and norms of behavior	●	2.3 Governance	31
Comprehensive	102-17	Mechanisms for advice and concerns about ethics		2.3 Governance	31
Core	102-18	Governance structure	●	2.3 Governance	31
Comprehensive	102-19	Delegating authority		1.1 Sustainable Management	9
Comprehensive	102-20	Executive-level responsibility for economic, environmental, and social topics		2.3 Governance	31

Option	No.	Disclosure	External Verification	Chapter	Page
Comprehensive	102-21	Consulting stakeholders on economic, environmental, and social topics		1.2 Stakeholder Communication and Participation	13
Comprehensive	102-22	Composition of the highest governance body and its committees		2.3 Governance	31
Comprehensive	102-23	Chair of the highest governance body		2.3 Governance	31
Comprehensive	102-24	Nominating and selecting the highest governance body		2.3 Governance	31
Comprehensive	102-25	Conflicts of interest		2.3 Governance	31
Comprehensive	102-26	Role of highest governance body in setting purpose, values, and strategy		2.3 Governance	31
Comprehensive	102-31	Review of economic, environmental, and social topics		2.3 Governance	31
Comprehensive	102-32	Highest governance body's role in sustainability reporting		About This Report	2
Comprehensive	102-34	Nature and total number of critical concerns		1.1 Sustainable Management	9
Comprehensive	102-35	Remuneration policies		2.3 Governance	31
Comprehensive	102-36	Process for determining remuneration		2.3 Governance	31
Comprehensive	102-37	Stakeholders' involvement in remuneration		2.3 Governance	31
Core	102-40	List of stakeholder groups	●	1.2 Stakeholder Communication and Participation	13
Core	102-41	Collective bargaining agreements	●	5.1 Talent Structure	87
Core	102-42	Identifying and selecting stakeholders	●	1.2 Stakeholder Communication and Participation	13
Core	102-43	Approach to stakeholder engagement	●	1.2 Stakeholder Communication and Participation	13
Core	102-44	Key topics and concerns raised	●	1.2 Stakeholder Communication and Participation	13
Core	102-45	Entities included in the consolidated financial statements	●	2.1 Introduction	19
Core	102-46	Defining report content and topic Boundaries	●	1.3 Material Topics	15
Core	102-47	List of material topics	●	1.3 Material Topics	15
Core	102-48	Restatements of information	●	About This Report	2
Core	102-49	Changes in reporting	●	About This Report	2
Core	102-50	Reporting period	●	About This Report	2
Core	102-51	Date of most recent report	●	About This Report	2
Core	102-52	Reporting cycle	●	About This Report	2
Core	102-53	Contact point for questions regarding the report	●	About This Report	2
Core	102-54	Claims of reporting in accordance with the GRI Standards	●	About This Report	2
Core	102-55	GRI content index	●	Appendix I	109
Core	102-56	External assurance	●	Appendix V	116

10 Material

*Material Topics

Topic	No.	Disclose	External Verification	Chapter	Page
Economic					
Economic Performance	201-1	Direct economic value generated and distributed		2.2 Operating Information	26
	201-2	Financial implications and other risks and opportunities due to climate change		4.1 Sustainable Environment Strategy	67
	201-3	Defined benefit plan obligations and other retirement plans		5.1 Talent Structure	87
	201-4	Financial assistance received from government		2.2 Operating Information	26
Market Presence	202-1	Ratios of standard entry level wage by gender compared to local minimum wage		5.1 Talent Structure	87
	202-2	Proportion of senior management hired from the local community		5.1 Talent Structure	87
Indirect Economic Impacts	203-1	Infrastructure investments and services supported		2.5 Contribute to the society	40
Procurement Practices	204-1	Proportion of spending on local suppliers		3.5 Sustainable Supply Chain	60
Anti-corruption	205-1	Operations assessed for risks related to corruption		2.3 Governance	31
	205-2	Communication and training about anti-corruption policies and procedures		2.3 Governance	31
	205-3	Confirmed incidents of corruption and actions taken		2.3 Governance	31
Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	●	3.1 Product Introduction	48
Environmental					
Materials	301-1	Materials used by weight or volume		4.2 Sustainable Resource Management	70
	301-2	Recycled input materials used	●	4.2 Sustainable Resource Management	70
	301-3	Reclaimed products and their packaging materials		4.2 Sustainable Resource Management	70
*Energy	GRI 103	Management Approach		4.2 Sustainable Resource Management	70
	302-1	Energy consumption within the organization	●	4.2 Sustainable Resource Management	70
	302-3	Energy intensity	●	4.2 Sustainable Resource Management	70
	302-4	Reduction of energy consumption		4.2 Sustainable Resource Management	70
	302-5	Reductions in energy requirements of products and services		4.2 Sustainable Resource Management	48
Water	303-1	Water withdrawal by source		4.2 Sustainable Resource Management	70
	303-2	Water sources significantly affected by withdrawal of water		4.2 Sustainable Resource Management	70
	303-3	Water recycled and reused		4.2 Sustainable Resource Management	70
Biodiversity	304-2	Significant impacts of activities, products, and services on biodiversity		4.1 Sustainable Environment Strategy	67
	304-3	Habitats protected or restored		4.1 Sustainable Environment Strategy	67



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Topic	No.	Disclose	External Verification	Chapter	Page
Emissions	305-1	Direct (Scope 1) GHG emissions	●	4.2 Sustainable Resource Management	70
	305-2	Energy indirect (Scope 2) GHG emissions	●	4.2 Sustainable Resource Management	70
	305-4	GHG emissions intensity		4.2 Sustainable Resource Management	70
	305-5	Reduction of GHG emissions		4.2 Sustainable Resource Management	70
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions		4.3 Green Innovation	80
Effluents and Waste	306-1	Water discharge by quality and destination		4.3 Green Innovation	80
	306-2	Waste by type and disposal method		4.3 Green Innovation	80
	306-3	Significant spills		4.1 Sustainable Environment Strategy	67
	306-5	Water bodies affected by water discharges and/or runoff		4.3 Green Innovation	80
* Environmental Compliance	GRI 103	Management Approach		2.3 Governance	31
	307-1	Non-compliance with environmental laws and regulations	●	4.1 Sustainable Environment Strategy	67
Supplier Environmental Assessment	308-1	New suppliers that were screened using environmental criteria		3.5 Sustainable Supply Chain	60
	308-2	Negative environmental impacts in the supply chain and actions taken		3.5 Sustainable Supply Chain	60
Social					
*Employment	GRI 103	Management Approach		5.1 Talent Structure	87
	401-1	New employee hires and employee turnover	●	5.1 Talent Structure	87
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees		5.1 Talent Structure	87
	401-3	Parental leave	●	5.1 Talent Structure	87
Labor/ Management Relations	402-1	Minimum notice periods regarding operational changes		5.1 Talent Structure	87
*Occupational Health and Safety	GRI 103	Management Approach		5.3 Safe Workplace	100
	403-1	Workers representation in formal joint management-worker health and safety committees		5.3 Safe Workplace	100
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	●	5.3 Safe Workplace	100
	403-3	Workers with high incidence or high risk of diseases related to their occupation		5.3 Safe Workplace	100
	403-4	Health and safety topics covered in formal agreements with trade unions		5.3 Safe Workplace	100
Training and Education	404-1	Average hours of training per year per employee		5.2 Employee Care & Training	97
	404-2	Programs for upgrading employee skills and transition assistance programs		5.2 Employee Care & Training	97
	404-3	Percentage of employees receiving regular performance and career development reviews		5.1 Talent Structure	87

Topic	No.	Disclose	External Verification	Chapter	Page
Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees		5.1 Talent Structure	87
	405-2	Ratio of basic salary and remuneration of women to men		5.1 Talent Structure	87
Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor		5.1 Talent Structure	87
Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor		5.1 Talent Structure	87
Rights of Indigenous Peoples	411-1	Incidents of violations involving rights of indigenous peoples		5.1 Talent Structure	87
Human Rights Assessment	412-2	Employee training on human rights policies or procedures		5.1 Talent Structure	97
Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs		2.5 Contribute to the society	40
Supplier Social Assessment	414-1	New suppliers that were screened using social criteria		3.5 Sustainable Supply Chain	60
	414-2	Negative social impacts in the supply chain and actions taken		3.5 Sustainable Supply Chain	60
Public Policy	415-1	Political contributions		2.3 Governance	31
Customer Health and Safety	416-1	Assessment of the health and safety impacts of product and service categories	●	3.1 Product Introduction	48
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services		3.1 Product Introduction	48
Marketing and Labeling	417-1	Requirements for product and service information and labeling		3.1 Product Introduction	48
	417-2	Incidents of non-compliance concerning product and service information and labeling		3.1 Product Introduction	48
	417-3	Incidents of non-compliance concerning marketing communications		3.1 Product Introduction	48
Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data		3.4 Customer Service	57
*Socioeconomic Compliance	GRI 103	Management approach		2.3 Governance	31
	419-1	Non-compliance with laws and regulations in the social and economic area	●	2.3 Governance 3.1 Product Introduction 5.1 Talent Structure	31 48 87
Other					
Product Quality	Non GRI Standards index			3.2 Product Quality Management	52
Sustainable Development Strategy	Non GRI Standards index			2.2 Operating Information	26
Corporate Governance	Non GRI Standards index			See general standard disclosure GRI 102-18	31
Innovation and R&D	Non GRI Standards index			3.3 Research and Innovation	55
Risk Management	Non GRI Standards index			2.4 Risk Management	37
Customer Service	Non GRI Standards index			3.4 Customer Service	57



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Appendix III : United Nation Global Compact Index

Number	Article	Relevant Sections	Page(s)
1. Human Rights			
1	Businesses should support and respect the protection of internationally proclaimed human rights.	3.5 Sustainable Supply Chain 5.1 Talent Structure	60 87
2	Make sure that they are not complicit in human rights abuses.	5.1 Talent Structure	87
2.Labor			
3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	5.1 Talent Structure	87
4	The elimination of all forms of forced and compulsory labor.	Ch5 Friendly TGI	85
5	The effective abolition of child labor.	5.1 Talent Structure	87
6	The elimination of discrimination in respect of employment and occupation.	5.1 Talent Structure	87
3.Environment			
7	Businesses should support a precautionary approach to environmental challenges.	2.4 Risk Management Ch4 Green TGI	37 65
8	Undertake initiatives to promote greater environmental responsibility.	Ch4 Green TGI	65
9	Encourage the development and diffusion of environmentally friendly technologies.	3.3 Innovation and R&D 4.2 Sustainable Resource Management	55 70
4.Anti-Corruption			
10	Businesses should work against corruption in all its forms, including extortion and bribery.	2.3 Governance	31

Appendix IV : ISO26000 Guidance on Social Responsibility

Number	Article	Relevant Sections	Page(s)
1. Organizational Governance			
1.1	The system by which companies are directed and controlled	2.3 Governance	31
2. Human Rights			
2.1	Due diligence	3.5 Sustainable Supply Chain 5.1 Talent Structure	60 87
2.2	Human rights risk situations	3.5 Sustainable Supply Chain 5.1 Talent Structure	60 87
2.3	Avoidance of complicity	2.3 Governance	31
2.4	Resolving grievances	1.2 Stakeholder Communication and Participation 2.3 Governance	13 31
2.5	Discrimination and vulnerable groups	5.1 Talent Structure	87
2.6	Civil and political rights	2.3 Governance	31
2.7	Economic, social and cultural rights	Ch5 Friendly TGI	85

Appendix II : Sustainable Development Goals (SDGs) Index

No.	Goals	Relevant Sections	Page(s)
1	End poverty in all its forms everywhere.	--	
2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture.	--	
3	Ensure healthy lives and promote well-being for all at all ages.	Ch3 Quality TGI Ch5 Friendly TGI	46 85
4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	5.2 Employee Care & Training	97
5	Achieve gender equality and empower all women and girls.	Ch5 Friendly TGI	85
6	Ensure availability and sustainable management of water and sanitation for all.	Ch4 Green TGI	65
7	Ensure access to affordable, reliable, sustainable and modern energy for all.	--	
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	5.1 Talent Structure	87
9	Build resilient infrastructure, promote inclusive and Sustainable industrialization and foster innovation.	--	
10	Reduce inequality within and among countries.	5.1 Talent Structure	87
11	Make cities and human settlements inclusive, safe, resilient and sustainable.	--	
12	Ensure sustainable consumption and production patterns.	Ch3 Quality TGI Ch4 Green TGI	46 65
13	Take urgent action to combat climate change and its impacts.	4.1 Sustainable Environment Strategy	67
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development.	--	
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	--	
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.	Ch2 About TGI	18
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development.	--	



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會計師獨立確信報告

台灣玻璃工業股份有限公司 公鑒：

一、 確信範圍

本事務所接受台灣玻璃工業股份有限公司（以下簡稱台玻公司）之委任，對 2017 年度企業社會責任報告書中所選定之永續績效資訊進行有限確信並出具意見。

有關台玻公司所選定之標的資訊及其適用基準，詳附件一。

管理階層責任

台玻公司管理階層應依據適當之基準編製2017年度企業社會責任報告書，包括參考全球永續性報告協會(Global Reporting Initiatives, GRI)於2016年10月19日正式發表的永續報告準則「GRI Standards」，並應設計、執行及維護與報告編製相關之內部控制，以蒐集並揭露報告書內容。

本事務所責任

本事務所係依照財團法人中華民國會計研究發展基金會所發布之確信準則公報第一號「非屬歷史性財務資訊查核或核閱之確信案件」之要求規劃並執行有限確信工作。

二、 確信工作

有限確信案件中執程序之性質及時間與適用於合理確信案件不同，其範圍亦較小，所取得之確信程度明顯低於合理確信案件。為取得有限確信，本事務所於決定確信程序之性質及範圍時曾考量台玻公司內部控制之有效性，但目的並非對台玻公司內部控制之有效性表示意見。

為作成有限確信之結論，本事務所已執行下列工作：

- 與台玻公司之管理階層及員工進行訪談，以瞭解台玻公司履行企業社會責任之整體情況，以及報導流程；
- 透過訪談、檢查相關文件，以瞭解台玻公司之主要利害關係人及利害關係人之期望與需求、雙方具體之溝通管道，以及台玻公司如何回應該等期望與需求；

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- 針對報告中所選定之永續績效資訊進行分析性程序；蒐集並評估其他支持證據資料及所取得之管理階層聲明；如必要時，則抽選樣本進行測試；
- 閱讀台玻公司之企業社會責任報告書，確認其與本事務所取得關於企業社會責任整體履行情況之瞭解一致。

三、先天限制

因企業社會責任報告中所包含之非財務資訊受到衡量不確定性之影響，選擇不同的衡量方式，可能導致績效衡量上之重大差異，且由於確信工作係採抽樣方式進行，且任何內部控制均受有先天限制，故未必能查出所有業已存在之重大不實表達，無論是導因於舞弊或錯誤。

四、品質管制與獨立性

本事務所遵循審計準則公報第四十六號會計師事務所之品質管制之規範，建立並維護完備之品質管制制度，包含遵循職業道德規範、專業準則及所適用法令相關之書面政策及程序。本所亦遵循會計師職業道德規範中有關獨立性及其他道德規範之規定，該規範之基本原則為正直、公正客觀、專業能力及盡專業上應有之注意、保密及專業態度。

五、結論

依據本事務所執行之程序及所獲取之證據，未發現台玻公司所選定之永續績效資訊有未依照適用基準編製而須作重大修正之情事。且本事務所未發現台玻公司 2017 年度企業社會責任報告書有未依據 GRI Standards 核心選項編製而須作重大修正之情事。

安永聯合會計師事務所

會計師：蕭翠慧



民國一〇七年六月二十九日

附件一：

編號	頁次	內文標題	標的資訊	適用基準
1		符合性確信	台玻揭露2017年度企業社會責任報告書係依據全球永續性報告協會所發布之永續報告準則「GRI Standards」	永續報告準則
2	48	3.1 產品介紹	台玻產品2017年無違反產品健康與安全、標示及市場推廣相關法規，亦無發生產品被禁止銷售之事件；亦無涉及反競爭行為、反托拉斯與壟斷措施之法律訴訟	公司適用之商品標示法、食品安全衛生管理法、國際反托拉斯法、消費者保護法
3	71	4.2 永續資源管理-碎玻璃回收	2017年度平板玻璃及玻璃容器回收玻璃使用量佔比	公司統計資料
4	72	4.2 永續環境策略-能源管理	2017年台玻各項能源使用量	公司統計資料
5	72	4.2 永續環境策略-能源管理	2017年平板玻璃、玻璃容器能源耗用強度	公司統計資料
6	73	4.2 永續資源管理-溫室氣體盤查	2017年台玻各產品碳排放量-直接碳排放量(噸CO ₂ e)	公司統計資料
7	73	4.2 永續資源管理-溫室氣體盤查	2017年台玻各產品碳排放量-間接碳排放量(噸CO ₂ e)	公司統計資料
8	69	4.1 永續環境策略-環保法規遵循	2017年環保違規事件裁罰金額	公司適用之環境法規及公司統計資料
9	90-91	5.1 人才組成-員工新進率及離職率統計	2017年員工新進/離職之情形	公司統計資料
10	95	5.1 人才組成-員工福利	2017年員工育嬰留停情形	公司統計資料
11	102	5.3 安心職場-職業安全管理	2017年失能傷害率、失能傷害嚴重率、缺勤率	公司統計資料
12	90	5.1 人才組成-人員招募	2017年職業安全違規罰款金額	公司適用之職業安全法規及公司統計資料

